Pioneer

Operating Instructions

AUDIO/VIDEO MULTI-CHANNEL AMPLIFIER

SC-LX90

IMPORTANT

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

D3-4-2-1-1_En-A

Replacement and mounting of an AC plug on the power supply cord of this unit should be performed only by qualified service personnel.

IMPORTANT: THE MOULDED PLUG

This appliance is supplied with a moulded three pin mains plug for your safety and convenience. A 10 amp fuse is fitted in this plug. Should the fuse need to be replaced, please ensure that the replacement fuse has a rating of 10 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover, you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be obtained from your local dealer.

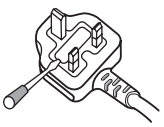
If the fitted moulded plug is unsuitable for your socket outlet, then the fuse shall be removed and the plug cut off and disposed of safely. There is a danger of severe electrical shock if the cut off plug is inserted into any 13 amp socket.

If a new plug is to be fitted, please observe the wiring code as shown below. If in any doubt, please consult a qualified electrician.

IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:
Blue : Neutral Brown : Live
As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows ;

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter **N** or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter **L** or coloured RED.

How to replace the fuse: Open the fuse compartment with a screwdriver and replace the fuse.



D3-4-2-1-2-2_B_En

WARNING

Before plugging in for the first time, read the following section carefully.

The voltage of the available power supply differs according to country or region. Be sure that the power supply voltage of the area where this unit will be used meets the required voltage (e.g., 230 V or 120 V) written on the rear panel. D3-4-2-1-4_A_En

WARNING

To prevent a fire hazard, do not place any naked flame sources (such as a lighted candle) on the equipment. D3-4-2-1-7a_A_En

European model only

This product complies with the Low Voltage Directive 2006/95/EC and EMC Directive 2004/108/EC.

D3-4-2-1-9a_A_En

WARNING

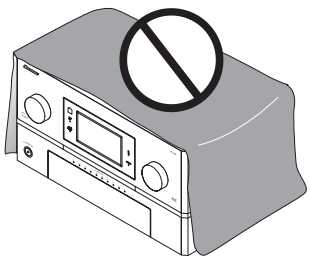
This equipment is not waterproof. To prevent a fire or shock hazard, do not place any container filled with liquid near this equipment (such as a vase or flower pot) or expose it to dripping, splashing, rain or moisture. D3-4-2-1-3_B_En

VENTILATION CAUTION

When installing this unit, make sure to leave space around the unit for ventilation to improve heat radiation (at least 60 cm at top, 10 cm at rear, and 30 cm at each side).

WARNING

Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the product, and to protect it from overheating. To prevent fire hazard, the openings should never be blocked or covered with items (such as newspapers, table-cloths, curtains) or by operating the equipment on thick carpet or a bed. D3-4-2-1-7b_A_En



If the AC plug of this unit does not match the AC outlet you want to use, the plug must be removed and appropriate one fitted. Replacement and mounting of an AC plug on the power supply cord of this unit should be performed only by qualified service personnel. If connected to an AC outlet, the cut-off plug can cause severe electrical shock. Make sure it is properly disposed of after removal.
The equipment should be disconnected by removing the mains plug from the wall socket when left unused for a long period of time (for example, when on vacation). **D3-4-2-2-1a_A_En**

CAUTION
The ⏻**STANDBY/ON** switch on this unit will not completely shut off all power from the AC outlet. Since the power cord serves as the main disconnect device for the unit, you will need to unplug it from the AC outlet to shut down all power. Therefore, make sure the unit has been installed so that the power cord can be easily unplugged from the AC outlet in case of an accident. To avoid fire hazard, the power cord should also be unplugged from the AC outlet when left unused for a long period of time (for example, when on vacation).

D3-4-2-2-2a_A_En

Operating Environment

Operating environment temperature and humidity: +5 °C to +35 °C (+41 °F to +95 °F); less than 85 %RH (cooling vents not blocked)
Do not install this unit in a poorly ventilated area, or in locations exposed to high humidity or direct sunlight (or strong artificial light) **D3-4-2-1-7c_A_En**

This product is for general household purposes. Any failure due to use for other than household purposes (such as long-term use for business purposes in a restaurant or use in a car or ship) and which requires repair will be charged for even during the warranty period. **K041_En**

European model only

If you want to dispose this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery and recycling.

Private households in the member states of the EU, in Switzerland and Norway may return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar new one).

For countries not mentioned above, please contact your local authorities for the correct method of disposal.

By doing so you will ensure that your disposed product undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health.

K058_A_En

Changing the TV format setting

If the **System Setup** menu is not displayed correctly, it may be that the TV system is set incorrectly for your country or region.

1 With the amplifier in standby, press ⏻ STANDBY/ON while holding down the SETUP button.

2 Select PAL/NTSC using ⬆/⬇, then select PAL or NTSC using ⬅/➡.

The display shows the new setting (**PAL** or **NTSC**).

Thank you for buying this Pioneer product. Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.

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Chapter 1:
Before you start

Checking what's in the box

An accessory box is supplied with this amplifier. It can be used to store the supplied accessories other than the Warranty card.

Please check that you've received the following supplied accessories:

- Setup microphone (cable: 5 m)
- Remote control unit
- AA/IEC R6P dry cell batteries x2
- iPod control cable
- Power cord
- Wiping cloth
- Warranty card
- These operating instructions

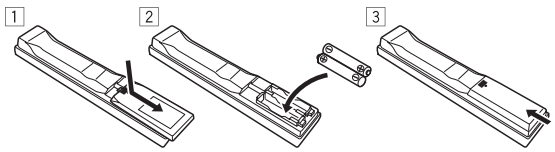
Installing the amplifier

- When installing this unit, make sure to put it on a level and stable surface.

Don't install it on the following places:
– on a color TV (the screen may distort)
– near a cassette deck (or close to a device that gives off a magnetic field). This may interfere with the sound.
– in direct sunlight
– in damp or wet areas
– in extremely hot or cold areas
– in places where there is vibration or other movement
– in places that are very dusty
– in places that have hot fumes or oils (such as a kitchen)

- Do not touch this amplifier's bottom panel while the power is turned on. The bottom panel gets hot when the power is on, and touching it could cause burns.

Loading the batteries



Caution

Incorrect use of batteries may result in such hazards as leakage and bursting. Observe the following precautions:

- Never use new and old batteries together.
- Insert the plus and minus sides of the batteries properly according to the marks in the battery case.
- Batteries with the same shape may have different voltages. Do not use different batteries together.
- When disposing of used batteries, please comply with governmental regulations or environmental public instruction's rules that apply in your country or area.
- **WARNING**
  Do not use or store batteries in direct sunlight or other excessively hot place, such as inside a car or near a heater. This can cause batteries to leak, overheat, explode or catch fire. It can also reduce the life or performance of batteries.

Chapter 2: Simple Home Theater Guide

Introduction to home theater

Home theater refers to the use of multiple audio tracks to create a surround sound effect, making you feel like you're in the middle of the action or concert. The surround sound you get from a home theater system depends not only on your speaker setup, but also on the source and the sound settings of the amplifier.

This amplifier will automatically decode multichannel Dolby Digital, DTS, or Dolby Surround sources according to your speaker setup. In most cases, you won't have to make changes for realistic surround sound, but other possibilities (like listening to a CD with multichannel surround sound) are explained in *Listening to your system* on page 34.

Listening to Surround Sound

This amplifier has been designed with the easiest possible setup in mind. However, before proceeding to the quick setup guide given below, you have to decide the purpose of your speaker system and hook up your system for surround sound. After the following quick setup, you can simply leave the amplifier in the default settings in most cases.

- Be sure to complete all connections before connecting this unit to an AC power source.

1 Select the speaker usage method.
See *Selecting the speaker layout/usage pattern* on page 9.

2 Connect your speakers and place them for optimum surround sound.
Connect your speakers as shown in *Positioning and connecting the speakers* on page 10.

3 Connect your TV and DVD player.
See *Connecting your TV and DVD player* on page 20 to do this. For surround sound, you'll want to hook up using a digital connection from the DVD player to the amplifier.

4 Plug in the amplifier and switch it on, followed by your DVD player, your subwoofer and the TV.
Plug the power cable into the AC outlet and switch on the amplifier.[1] Make sure you've set the video input on your TV to this amplifier. Check the manual that came with the TV if you don't know how to do this.

- Set the subwoofer volume to a comfortable level.

5 Use the on-screen Auto MCACC Setup to set up your system.
See *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11 for more on this.

6 Play a DVD, and adjust the volume to your liking.
Make sure that **DVD/LD** is showing in the amplifier's display, indicating that the DVD input is selected. If it isn't, press **DVD** on the remote control to set the amplifier to the DVD input.

In addition to the basic playback explained in *Playing a source* on page 13, there are several other sound options you can select. See *Listening to your system* on page 34 for more on this.

See also *Making amplifier settings from the System Setup menu* on page 40 for more setup options.

Note

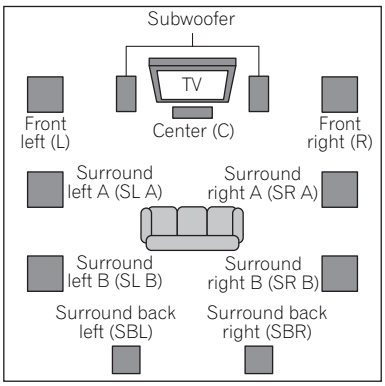
1 After this amplifier is connected to an AC outlet, a 15-second HDMI initialization process begins. You cannot carry out any operations during this process. The HDMI indicator in the front LCD display blinks during this process, and you can turn on this amplifier once it has stopped blinking. When you set the **HDMI Control** mode to **OFF**, you can skip this process. For details about the **HDMI Control** feature, see *HDMI Control* on page 91.

Selecting the speaker layout/usage pattern

This amplifier is equipped with speaker terminals for 10 channels, and the speaker layout/usage pattern can be selected to suit the user's tastes. There are five speaker layout/usage patterns, as described below. When using this amplifier, be sure to select one of the five patterns below before proceeding with the connections, settings and playback operations.[1]

Once you have decided on the speaker layout/usage pattern, connect the speakers. Proceed to *Positioning and connecting the speakers* on page 10.

Normal surround connections (default setting)



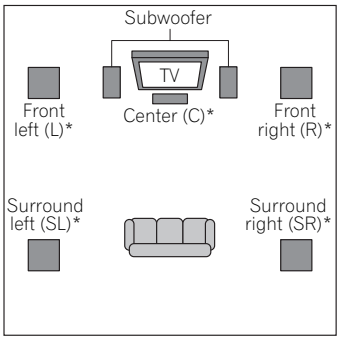
Features: Connections can be made in the ways from 2 channels for stereo playback to 5.1 (the basic requirement for a home theater) or 7.1 channels, and on this amplifier it is even possible to connect 9.2 channels. With 9.1-channel (or 9.2-channel) connections, two surround speakers are used on each of the left and right sides, a speaker layout similar to that used in movie theaters. Furthermore, the set can be used for both movies and for high sound quality multi-channel music sources such as SACD and DVD Audio discs.

Speakers used: Total maximum 9 (2 front, 1 center, 4 surround, 2 surround back)

Applicable listening rooms: The conditions in any listening room can be accommodated, but when using 9.2 channels of speakers, ideally the space should be large enough for the speakers.

Output Setup: **Normal**

5.2-channel Bi-amp connections



*: bi-amp compatible speakers

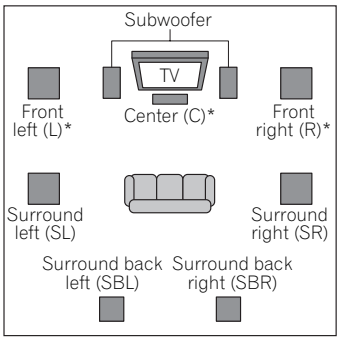
Features: The front, center and surround channels are all reproduced with high quality (bi-amp). Fewer speakers are used than with other patterns and the maximum number of channels is 5.2, but this pattern provides the highest sound quality.

Speakers used: Total 5 bi-amp compatible speakers (2 front, 1 center, 2 surround)

Applicable listening rooms: Suited to all listening rooms

Output Setup: **All Ch Bi-Amp**

7.2-channel front Bi-amp connections



*: bi-amp compatible speakers

Features: Provides up to 7.2-channel surround playback with high quality sound (bi-amp) from the front and center speakers.

Speakers used: Total 7 (2 front (bi-amp compatible), 1 center (bi-amp compatible), 2 surround, 2 surround back)

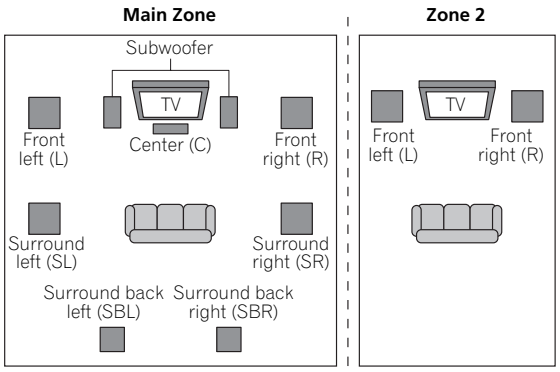
Applicable listening rooms: Rooms with space to place the surround back speakers behind or above the listening position

Output Setup: **Front Bi-Amp**

Note

1 If you want to expand the system into a surround playback environment though there are currently only two speakers, or if you want to make bi-amp connections though you do not have enough speaker cables, select the pattern you are thinking of trying. For either pattern, the optimum playback environment can be achieved using Auto MCACC Setup, regardless of the number of speakers.

7.2-channel + Zone 2 connections



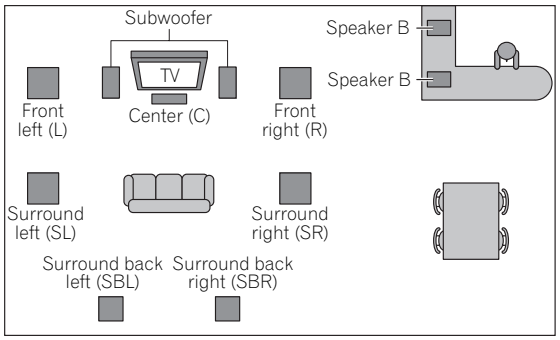
Features: Up to 7.2-channel playback in the main zone with playback of a different device in Zone 2.

Speakers used: Total 9 (4 front, 1 center, 2 surround, 2 surround back)

Applicable listening rooms: When there are two listening rooms

Output Setup: **7.2ch + ZONE 2**

7.2-channel + speaker B connections



Features: Up to 7.2-channel playback in the normal listening room plus stereo playback of the same sound in another room (for example a kitchen). Furthermore, different front speakers can be used for movies (multi-channel playback) and music (stereo playback).

Speakers used: Total 9 (4 front, 1 center, 2 surround, 2 surround back)

Applicable listening rooms: When there is a main listening room + a kitchen, etc.

Output Setup: **7.2ch + Speaker B**

Positioning and connecting the speakers

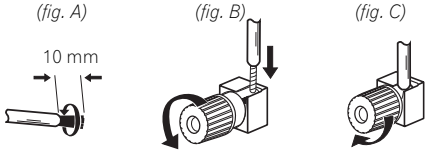
For the speaker layout, refer to *Selecting the speaker layout/usage pattern* on page 9. We recommend positioning the speakers before connecting them. Use one of the five connection examples below according to the speaker layout/usage pattern selected.[1] Use commercially available speaker cords to make the connections.

Bare wire connections

Make sure that the speaker cable you're going to use is properly prepared with about 10 mm of insulator stripped from each wire, and the exposed wire strands twisted together (*fig. A*).

To connect a terminal, unscrew the terminal a few turns until there is enough space to insert the exposed wire (*fig. B*). Once the wire is in position, tighten the terminal until the wire is firmly clamped (*fig. C*).

(fig. A) *(fig. B)* *(fig. C)*



Important

- Before connecting the equipment, make sure that the power is turned off and the power cords are unplugged from the power outlets.

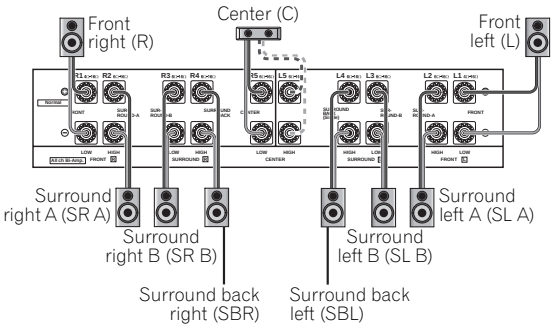
Note

1 • You can use speakers with a nominal impedance between 6 Ω and 16 Ω (or between 4 Ω and 16 Ω for the R1/L1 terminals).
• Each speaker connection on the amplifier comprises a positive (+) and negative (–) terminal. Make sure to match these up with the terminals on the speakers themselves.
• Make sure that all the bare speaker wire is twisted together and inserted fully into the speaker terminal. If any of the bare speaker wire touches the back panel it may cause the power to cut off as a safety measure.

Normal surround connections (default setting)

When using only one surround back speaker, connect it to the L4 (Single) terminals.

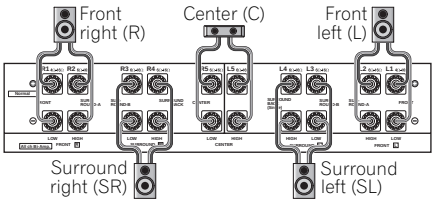
When only two surround speakers are connected, connect them to the L2 (SL A) and R2 (SR A) terminals.



If the center speaker is bi-amp compatible, make bi-amp connections to achieve high quality sound.

5.2-channel Bi-amp connections

Make bi-amp connections using speakers that are all bi-amp compatible.

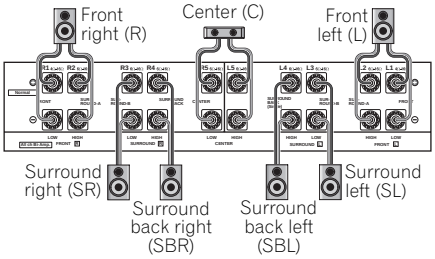


7.2-channel front Bi-amp connections

For details about the bi-amp connections, see *Bi-amping your speakers* on page 62.

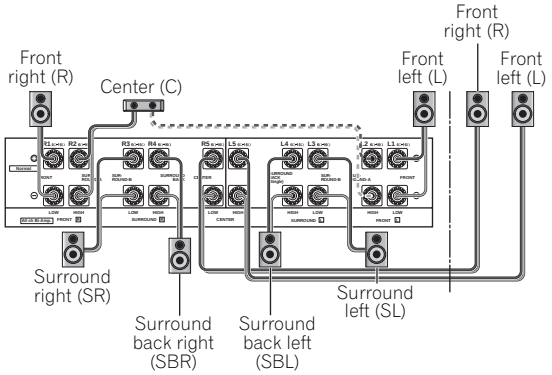
When using only one surround back speaker, connect it to the L4 (Single) terminals.

Make bi-amp connections using speakers that are bi-amp compatible for the front and center.



7.2-channel + Zone 2 connections

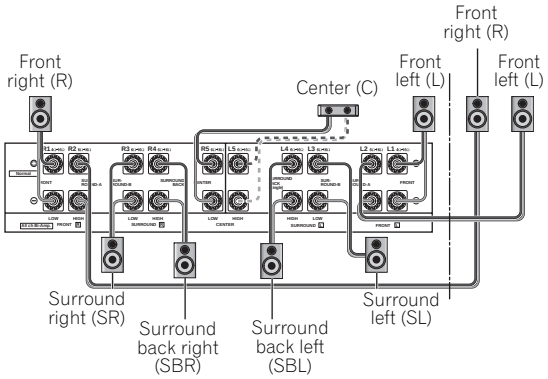
When using only one surround back speaker, connect it to the L4 (Single) terminals.



If the center speaker is bi-amp compatible, make bi-amp connections to achieve high quality sound.

7.2-channel + speaker B connections

When using only one surround back speaker, connect it to the L4 (Single) terminals.



If the center speaker is bi-amp compatible, make bi-amp connections to achieve high quality sound.

Automatically setting up for surround sound (MCACC & Full Band Phase Control)

The Auto MCACC Setup measures the acoustic characteristics of your listening area, taking into account ambient noise, speaker size and distance, and tests for both channel delay and channel level. After you have set up the microphone provided with your system, the amplifier uses the information from a series of test tones to optimize the speaker settings and equalization for your particular room, and also to calibrate the frequency-phase characteristics of the speakers connected.

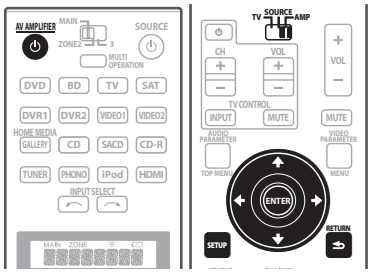
Make sure you do this before moving on to *Playing a source* on page 13.

Important

- Make sure the microphone and speakers are not moved during the Auto MCACC Setup.
- Using the Auto MCACC Setup will overwrite any existing settings for the MCACC preset you select.
- Before using the Auto MCACC Setup, the headphones should be disconnected and the iPod or HOME MEDIA GALLERY function should not be selected as an input source.

Caution

- The test tones used in the Auto MCACC Setup are output at high volume.

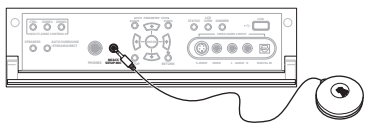


1 Switch on the amplifier and your TV.

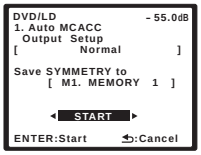
2 Connect the microphone to the MCACC SETUP MIC jack on the front panel.

Place the microphone so that it's about ear level at your normal listening position (use a tripod if possible). Make sure there are no obstacles between the speakers and the microphone.

- Push down on the lower portion of the front panel door to access the **MCACC SETUP MIC** jack:



The Auto MCACC display appears once the microphone is connected.[1]



3 Make sure 'Normal' is selected,[2] select an MCACC preset[3], then select START.[4]

4 Follow the instructions on-screen.

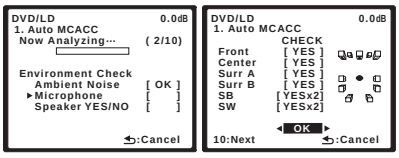
Make sure the microphone is connected, and if you're using a subwoofer, make sure it is switched on and set to a comfortable volume level.

5 Wait for the test tones to finish, then confirm the speaker configuration in the OSD.

A progress report is displayed on-screen while the amplifier outputs test tones to determine the speakers present in your setup. Try to be as quiet as possible while it's doing this.[5]

If no operations are performed for 10 seconds while the speaker configuration check screen is being displayed, the Auto MCACC Setup will resume automatically. In this case, you don't need to select '**OK**' and press **ENTER** in step 6.

- With error messages (such as **Too much ambient noise!** or **Check Microphone**) select **RETRY** after checking for ambient noise (see *Problems when using the Auto MCACC Setup* on page 13) and verifying the mic connection. If there doesn't seem to be a problem, you can simply select **GO NEXT** and continue.



The configuration shown on-screen should reflect the actual speakers you have.

Note

1 • You can't use the System Setup menu in either the main or sub zone when the iPod or HOME MEDIA GALLAERY input source is selected. When you set **ZONE 2**, **ZONE 3** or **ZONE 2&3** to **ON** (page 66), you can't use the System Setup menu.
• If you cancel the Auto MCACC Setup, or leave an error message for over three minutes, the screen saver will appear.

2 • The setting you should select differs according to the selected speaker layout/usage method (for example if you are planning to make bi-amp connections, to set up another speaker system, etc.). For details see *Selecting the speaker layout/usage pattern* on page 9 and *Speaker output setting* on page 43.
• If you have THX-certified speakers, select **CUSTOM** and choose **YES** for the **THX Speaker** setting.

3 The six MCACC presets are used for storing surround sound settings for different listening positions. Simply choose an unused preset for now (you can rename it later in *Data Management* on page 50).

4 Note that correction curves are saved only when set to **SYMMETRY**. Select **CUSTOM** to save other correction curves (such as **ALL CH ADJUST** and **FRONT ALIGN**). See *Automatic MCACC (Expert)* on page 40 for more on this.

5 Do not adjust the volume during the test tones. This may result in incorrect speaker settings.

If you see an error message (**ERR**) in the right side column (or the speaker configuration displayed isn't correct), there may be a problem with the speaker connection. If selecting **RETRY** doesn't work, turn off the power and check the speaker connections. If there doesn't seem to be a problem, you can simply use ↑/↓ to select the speaker and ←/→ to change the setting (and number for surround back) and continue.

6 Make sure 'OK' is selected, then press ENTER.
A progress report is displayed on-screen while the amplifier outputs more test tones to determine the optimum amplifier settings for Channel Level, Speaker Distance, Standing Wave, Acoustic Cal EQ and Full Band Phase Control.

Again, try to be as quiet as possible while this is happening. It may take 3 to 10 minutes.

7 The Auto MCACC Setup has finished! Press RETURN to go back to the System Setup menu.[1]
Be sure to disconnect the microphone from this amplifier upon completion of the Auto MCACC setup.

The settings made in the Auto MCACC Setup should give you excellent surround sound from your system, but it is also possible to adjust these settings manually using the System Setup menu (starting on page 40).[2]

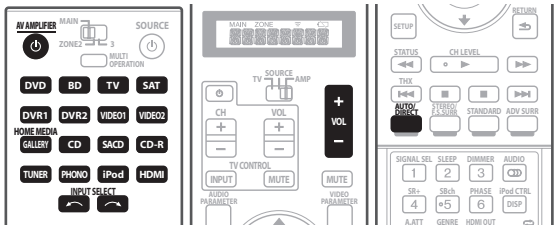
Problems when using the Auto MCACC Setup

If the room environment is not optimal for the Auto MCACC Setup (too much background noise, echo off the walls, obstacles blocking the speakers from the microphone) the final settings may be incorrect. Check for household appliances (air conditioner, fridge, fan, etc.), that may be affecting the environment and switch them off if necessary. If there are any instructions showing in the front LCD display, please follow them.

- Some older TVs may interfere with the operation of the microphone. If this seems to be happening, switch off the TV when doing the Auto MCACC Setup.

Playing a source

Here are the basic instructions for playing a source (such as a DVD disc) with your home theater system.



1 Switch on your system components and amplifier.
Start by switching on the playback component (for example a DVD player), your TV[3] and subwoofer (if you have one), then the amplifier (press **AV AMPLIFIER**⏻).

- Make sure the setup mic is disconnected.

2 Select the input source you want to play.
You can use the input source buttons on the remote control, **INPUT SELECT**, or the front panel **INPUT SELECTOR** dial.[4]

3 Press AUTO/DIRECT (AUTO SURROUND/STREAM DIRECT) to select 'AUTO SURROUND' and start playback of the source.[5]
If you're playing a Dolby Digital or DTS surround sound DVD disc, you should hear surround sound. If you are playing a stereo source, you will only hear sound from the front left/right speakers in the default listening mode.

- See also *Listening to your system* on page 34 for information on different ways of listening to sources.

It is possible to check on the LCD whether or not multi-channel playback is being performed properly.

When using a surround back speaker, **Dolby Digital EX** is displayed when playing Dolby Digital signals, and **DTS+Neo:6** is displayed when playing DTS 5.1-channel signals.

When not using a surround back speaker, **Dolby Digital** is displayed when playing Dolby Digital signals.

Note

1 You can also choose to view the settings from the MCACC Data Check screen. See *Automatic MCACC (Expert)* on page 40 for more on this.

2 • Depending on the characteristics of your room, sometimes identical speakers with cone sizes of around 12 cm end up with different size settings. You can correct the setting manually using the *Manual speaker setup* on page 52.
• The subwoofer distance setting may be farther than the actual distance from the listening position. This setting should be accurate (taking delay and room characteristics into account) and generally does not need to be changed.
• If Auto MCACC Setup measurement results are incorrect due to the interaction of the speakers and viewing environment, we recommend adjusting the settings manually.

3 Make sure that the TV's video input is set to this amplifier (for example, if you connected this amplifier to the **VIDEO 1** jacks on your TV, make sure that the **VIDEO 1** input is now selected).

4 If you need to manually switch the input signal type press **SIGNAL SEL** (page 37).

5 • You may need to check the digital audio output settings on your DVD player or digital satellite receiver. It should be set to output Dolby Digital, DTS and 88.2 kHz / 96 kHz PCM (2 channel) audio, and if there is an MPEG audio option, set this to convert the MPEG audio to PCM.
• Depending on your DVD player or source discs, you may only get digital 2 channel stereo and analog sound. In this case, the amplifier must be set to a multichannel listening mode (see *Listening in surround sound* on page 34 if you need to do this) if you want multichannel surround sound.

For other details, see *Listening modes with different input signal formats* on page 141. If the display does not correspond to the input signal and listening mode, check the connections and settings.

4 Use the volume control to adjust the volume level.
Turn down the volume of your TV so that all sound is coming from the speakers connected to this amplifier.

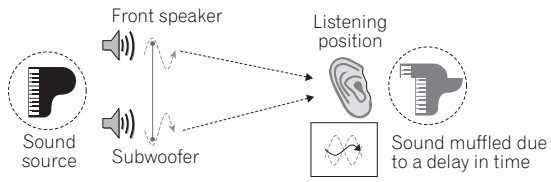
Better sound using Phase Control and Full Band Phase Control

This amplifier is equipped with the two types of functions that correct phase distortion and group delay: Phase Control and Full Band Phase Control. Activating Full Band Phase Control is strongly recommended because it also involves the effects of Phase Control. For details on each of these two features, refer to the following explanations.

Using Phase Control

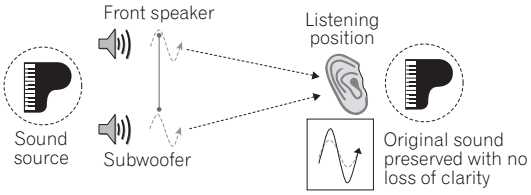
During multichannel playback, LFE (Low-Frequency Effects) signals as well as low-frequency signals in each channel are assigned to the subwoofer or other the subwoofer and the most appropriate speaker. At least in theory, however, this type of processing involves a group delay that varies with frequency, resulting in phase distortion where the low-frequency sound is delayed or muffled by the conflict with other channels. With the Phase Control mode switched on, this amplifier can reproduce powerful bass sound without deteriorating the quality of the original sound (see illustration below).

Phase Control OFF



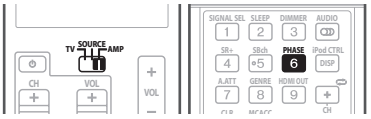
- Rhythms blurred and difficult to hear
- Bass sound with loss of depth
- Sound of musical instruments with no reality

Phase Control ON



- Rhythms with crystal-like clarity
- Bass sound with no loss of depth
- Sound of musical instruments with superb reality

Phase Control technology provides coherent sound reproduction through the use of phase matching[1] for an optimal sound image at your listening position. The default setting is on and we recommend leaving Phase Control switched on for all sound sources.



- **Set the operation selector switch to AMP, then press PHASE (PHASE CONTROL) to select PHASE CONTROL.**
The PHASE CONTROL indicator on the front panel lights.

Using Full Band Phase Control

The Full Band Phase Control feature calibrates the frequency-phase characteristics of the speakers connected.

Standard speakers designed exclusively for audio use generally reproduce sound with the divided frequency bands output from a speaker system consisting of multiple speakers (in case of typical 3-way speakers, for instance, the tweeter, the squawker (midrange), and the woofer output sound in the high-, middle-, and low-frequency ranges, respectively). Though these speakers are designed to flatten the frequency-amplitude characteristics across wide ranges, there are cases where the group delay characteristics are not effectively flattened. This phase distortion of the speakers subsequently causes group delay (the delay of low-frequency sound against high-frequency sound) during audio signal playback.

Note

1 • Phase matching is a very important factor in achieving proper sound reproduction. If two waveforms are 'in phase', they crest and trough together, resulting in increased amplitude, clarity and presence of the sound signal. If a crest of a wave meets a trough (as shown in the upper section of the diagram above), then the sound will be 'out of phase' and an unreliable sound image will be produced.

• The **PHASE CONTROL** feature is available even when the headphones are plugged in.

• If your subwoofer has a phase control switch, set it to the plus (+) sign (or 0°). However, the effect you can actually feel when **PHASE CONTROL** is set to **ON** on this amplifier depends on the type of your subwoofer. Set your subwoofer to maximize the effect. It is also recommended you try changing the orientation or the place of your subwoofer.

• Set the built-in lowpass filter switch of your subwoofer to OFF. If this cannot be done on your subwoofer, set the cutoff frequency to a higher value.

• If the speaker distance is not properly set, you may not have a maximized **PHASE CONTROL** effect.

• The **PHASE CONTROL** mode cannot be set to **ON** in the following cases:

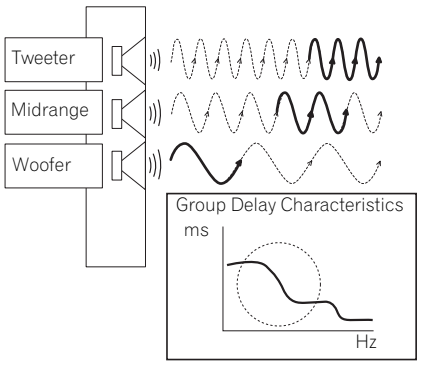
– When the **PURE DIRECT** mode is switched on.

– When the HDMI audio output parameter is set to **THROUGH** in *Setting the Audio options* on page 99.

This amplifier analyzes the frequency-phase characteristics of the speakers by calibrating test signals output from the speakers with the supplied microphone, therefore flattening the analyzed frequency-phase characteristics during audio signal playback[1] – the same correction is made for a pair of left and right speakers. This correction minimizes group delay between the ranges of a speaker and improves the frequency-phase characteristics across all ranges.

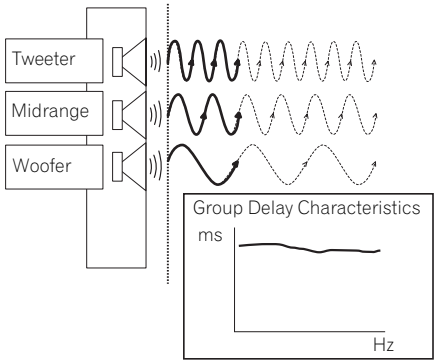
Furthermore, the enhanced frequency-phase characteristics between channels ensure better surround sound integration for multichannel setting.[2]

Full Band Phase Control OFF



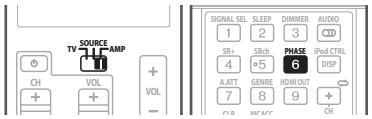
Sound in the middle- and low-frequency ranges is delayed against the high-frequency sound due to group delay.

Full Band Phase Control ON



With the phase distortion corrected, the frequency-phase characteristics are improved across all ranges.

- Sound with live dynamics
- Sound of musical instruments with superb reality
- Sound so accurately reproduced that you can even hear the lip movement of the singer
- Speech heard with no loss of clarity
- Surround sound with excellent integration



- **Set the operation selector switch to AMP, then press PHASE (PHASE CONTROL) to select FULLBAND PHASE.[3]**

Both the Phase Control and Full Band Phase Control functions are switched on. The PHASE CONTROL indicator lights on the front LCD display.

Note

1 To calibrate and analyze the frequency-phase characteristics of the speakers, follow the procedures in Auto MCACC Setup (see *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11) or **FULL BAND PHASE CTRL** in the System Setup (see *Full Band Phase Control* on page 49). Select **ALL** when you perform the Auto MCACC Setup with **CUSTOM**. Upon calibration of the frequency-phase characteristics of the speakers, the **FULL BAND PHASE CTRL** feature is automatically switched on. Note that **FULLBAND PHASE** cannot be selected unless the frequency-phase characteristics of the speakers are calibrated.

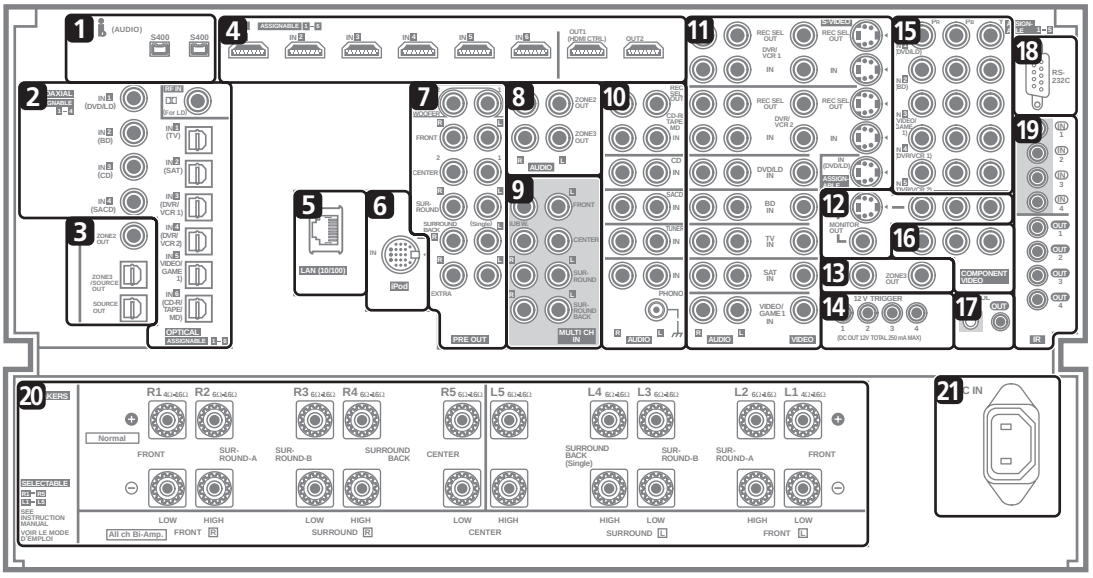
2 The original characteristics of group delay of the speakers calibrated and the targeted characteristics after correction can be displayed graphically in the OSD (see *Full Band Phase Control* on page 49). Also, when your PC is connected to this amplifier, the original characteristics of group delay of the speakers calibrated and the corrected characteristics of group delay can be displayed in 3-dimension on your PC (see *Advanced MCACC output using your PC* on page 70).

3 The **FULL BAND PHASE CTRL** mode cannot be set to **ON** in the following cases:
- When headphones are plugged in.
- When the **PURE DIRECT** mode is switched on.
- When the HDMI audio output parameter is set to **THROUGH** in *Setting the Audio options* on page 99.

Chapter 3:
Connecting your equipment

This amplifier provides you with many connection possibilities, but it doesn't have to be difficult. This page explains the kinds of components you can connect to make up your home theater system.

Rear panel



Caution

- Before making or changing the connections, switch off the power and disconnect the power cord from the power outlet. Plugging in should be the final step.

1 S-400 i.LINK connectors (x2)

Use to connect other i.LINK audio devices for high-resolution, multichannel digital audio input/output.

→ See *Using the i.LINK interface* on page 58.

2 Optical and coaxial digital audio inputs (x10)

Use for digital audio sources, including DVD players/ recorders, digital satellite receivers, CD players, etc. There's also an **RF IN** jack for connection to an LD player with a **RF** output.

→ See also *The Input Setup menu* on page 94 to assign the inputs.

3 Optical and coaxial digital audio outputs (x3)

Use for recording to a CD or MiniDisc recorder.

→ See *Connecting digital audio sources* on page 25.

These jacks are also used for MULTI-ZONE connections.

→ See *MULTI-ZONE listening* on page 64.

4 HDMI connectors (x8)

Multiple inputs and two outputs for high-quality audio/ video connection to compatible HDMI devices.

→ See *Connecting using HDMI* on page 18.
→ See *Switching the HDMI output* on page 103.

5 LAN (10/100) terminal

→ See *Playback with HOME MEDIA GALLERY inputs* on page 71.

6 iPod input terminal

Use to connect your Apple iPod as an audio or video source.

→ See *Connecting an iPod* on page 56.

7 Multichannel pre-amplifier outputs

Use to connect separate amplifiers for front, center, surround, surround back and subwoofer channels.

→ See *Connecting additional amplifiers* on page 63 (see also *Installing your speaker system* on page 27 for powered subwoofer connection).

8 MULTI-ZONE audio outputs

Use to connect a second or third amplifier in a separate room.

→ See *MULTI-ZONE listening* on page 64.

9 Multichannel analog audio inputs
7.1 channel inputs for connection to a DVD player with multichannel analog outputs.
→ See *Connecting the multichannel analog inputs* on page 60.

10 Stereo analog audio source inputs/(outputs) (x5)
Use for connection to audio sources such as CD players, tape decks, turntables, etc.
→ See *Connecting analog audio sources* on page 26.

11 Audio/video source inputs/(outputs) (x7)
Use for connection to audio/visual sources, such as DVD players/recorders, VCRs, etc. Each set of inputs has jacks for composite video, S-Video[1] and stereo analog audio.
→ See *Connecting a DVD/HDD recorder, VCR and other video sources* on page 23.

12 Composite, S-Video and Component monitor outputs
Use to connect monitors and TVs.
→ See *Connecting your TV and DVD player* on page 20.
→ See *Using the component video jacks* on page 24.

13 MULTI-ZONE video outputs
Use to connect monitors or TVs in a separate room.
→ See *MULTI-ZONE listening* on page 64.

14 12 V trigger jacks *(total 50 mA max.)* **(x4)**
Use to switch components in your system on and off according to the input function of the amplifier.
→ See *Switching components on and off using the 12 volt trigger* on page 67.

15 Component video inputs (x5)
Use the inputs to connect any video source that has component video output, such as a DVD recorder.
→ See *Using the component video jacks* on page 24.

16 MULTI-ZONE component video output
Use to connect monitors or TVs in a separate room.
→ See *MULTI-ZONE listening* on page 64.

17 Control input/output
Use to connect other Pioneer components so that you can control all your equipment from a single IR remote sensor.
→ See *Operating other Pioneer components with this unit's sensor* on page 111.

18 RS-232C connector
Use for connection to a PC for graphical output when using Advanced MCACC or Full Band Phase Control.
→ See *Connecting a PC for Advanced MCACC output* on page 69.

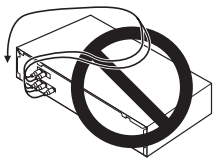
19 Remote inputs/outputs (MULTI-ZONE and source)
Use for connection to an external remote control sensor for use in a MULTI-ZONE setup, for example.
→ See *Connecting an IR receiver* on page 67.

20 Speaker terminals
Use for connection to the main front, center, surround and surround back speakers.
→ See *Installing your speaker system* on page 27.

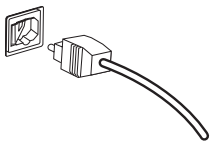
21 AC power inlet
Connect the supplied power cord here.

When making cable connections

- To avoid hum, do not lay connected cables over the top of the amplifier.



- When connecting optical cables, be careful when inserting the plug not to damage the shutter protecting the optical socket.



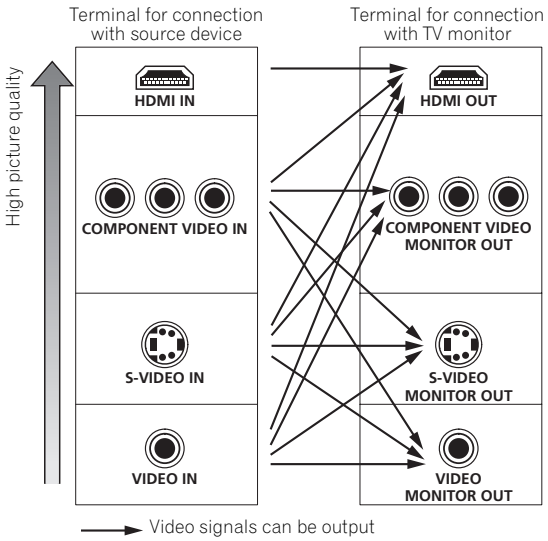
- When storing optical cable, coil loosely. The cable may be damaged if bent around sharp corners.

Note
1 You must assign the input source to the S-Video input to which you've connected your video component (see *The Input Setup menu* on page 94).

About the video converter

The video converter ensures that all video sources are output through all of the **MONITOR VIDEO OUT** jacks. The only exception is HDMI: since this resolution cannot be downsampled, you must connect your monitor/TV to the amplifier's HDMI video outputs when connecting this video source.[1]

If several video components are assigned to the same input function (see *The Input Setup menu* on page 94), the converter gives priority to HDMI, component, S-Video, then composite (in that order).



- For optimal video performance, THX recommends switching Digital Video Conversion (in *Setting the Video options* on page 101) **OFF**.

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Connecting using HDMI

If you have an HDMI or DVI (with HDCP) equipped component, you can connect it to this amplifier using a commercially available HDMI cable.[2]

The HDMI connection transfers uncompressed digital video, as well as almost every kind of digital audio that the connected component is compatible with, including DVD-Video, DVD-Audio, SACD, Dolby Digital Plus, Dolby TrueHD, DTS-HD Master Audio (see below for limitations), Video CD/Super VCD, CD and MP3. See *About the video converter* above for more on HDMI compatibility.

When connecting to an HDMI/DVI-compatible monitor or a plasma television using the HDMI OUT 2 terminal, switch the HDMI output setting to **HDMI OUT2**. See *Switching the HDMI output* on page 103.

Note

1 • If the video signal does not appear on your TV or plasma television, try adjusting the resolution settings on your component or display. Note that some components (such as video game units) have resolutions that may not be converted. In this case, try switching Digital Video Conversion (in *Setting the Video options* on page 101) **OFF**.

• The ZONE 2 video input can also be converted. For details, see *ZONE Video Setup* on page 96.

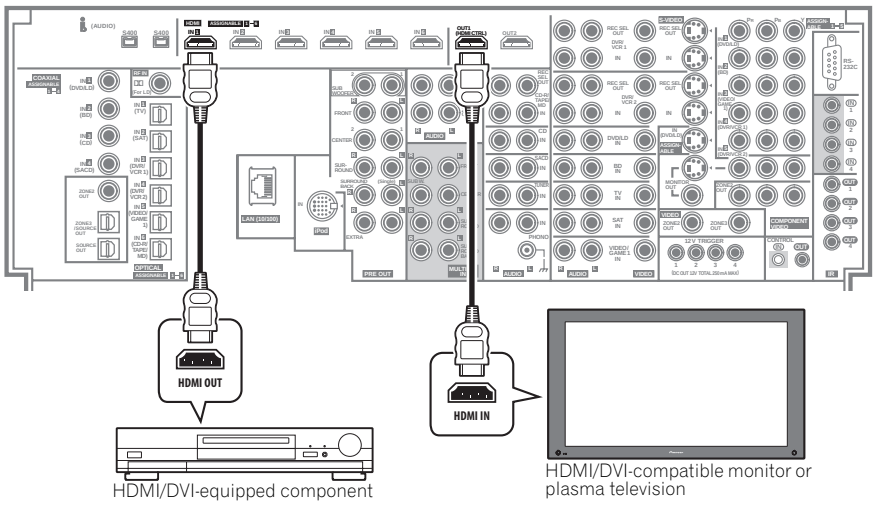
2 • An HDMI connection can only be made with DVI-equipped components compatible with both DVI and High Bandwidth Digital Content Protection (HDCP). If you choose to connect to a DVI connector, you will need a separate adaptor (DVI→HDMI) to do so. A DVI connection, however, does not support audio signals. Consult your local audio dealer for more information.

• If you connect a component that is not compatible with HDCP, a HDCP ERROR message is displayed on the front LCD display. Some components that are compatible with HDCP still cause this message to be displayed, but so long as there is no problem with displaying video this is not a malfunction.

• This amplifier has been designed to be compliant with HDMI (High Definition Multimedia Interface) Version 1.3a. Depending on the component you have connected, using a DVI connection may result in unreliable signal transfers.

• This amplifier supports SACD, Dolby Digital Plus, Dolby TrueHD and DTS-HD Master Audio. To take advantage of these formats, however, make sure that the component connected to this amplifier also supports the corresponding format.

SC-LX90



HDMI/DVI-equipped component

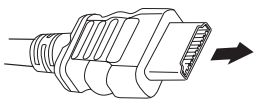
HDMI/DVI-compatible monitor or plasma television

1 Use an HDMI cable to connect one of the HDMI IN interconnects on this amplifier to an HDMI output on your HDMI component.

The **HDMI** indicator lights on the front panel when an HDMI-equipped component is connected.

2 Use an HDMI cable to connect the HDMI OUT interconnect on this amplifier to an HDMI interconnect on an HDMI-compatible monitor.

- The arrow on the cable connector body should be facing down for correct alignment with the connector on the player.



3 Use the INPUT SELECT button to select the HDMI input you've connected to (for example, HDMI 2).

You can also perform the same operation by using the **INPUT SELECTOR** dial on the front panel or by pressing **HDMI** on the remote control repeatedly.

- Set the HDMI parameter in *Setting the Audio options* on page 99 to **THROUGH** if you want to hear HDMI audio output from your TV or plasma television (no sound will be heard from this amplifier).
- If the video signal does not appear on your TV or plasma television, try adjusting the resolution settings on your component or display. Note that some components (such as video game units) have resolutions that may not be converted. In this case, use an analog video connection.
- You can't hear HDMI audio through this amplifier's digital out jacks.

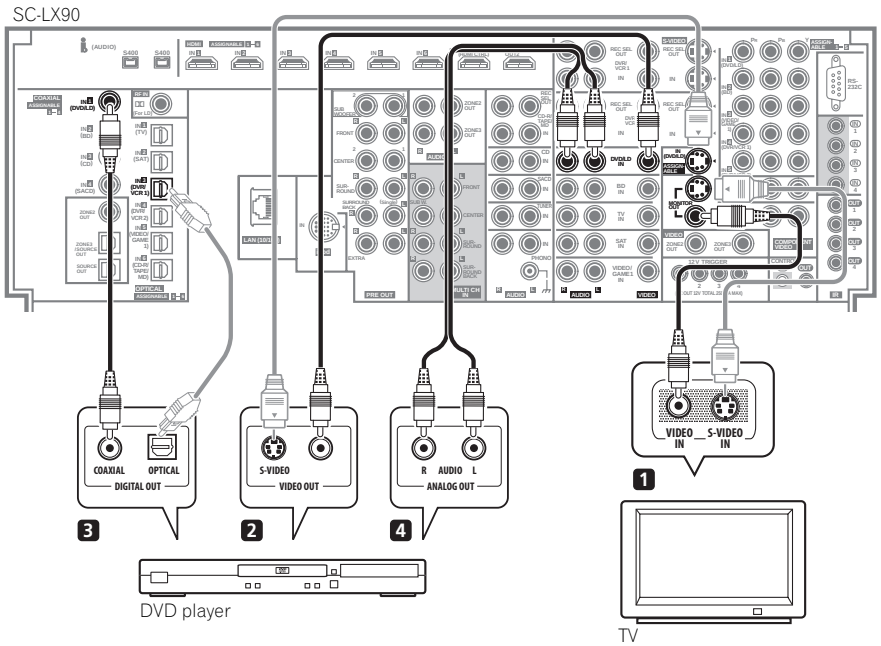
About HDMI

HDMI (High Definition Multimedia Interface) supports both video and audio on a single digital connection for use with DVD players, DTV, set-top boxes, and other AV devices. HDMI was developed to provide the technologies of High Bandwidth Digital Content Protection (HDCP) as well as Digital Visual Interface (DVI) in one specification. HDCP is used to protect digital content transmitted and received by DVI-compliant displays.

HDMI has the capability to support standard, enhanced, or high-definition video plus standard to multi-channel surround-sound audio. HDMI features include uncompressed digital video, one connector (instead of several cables and connectors), and communication between the AV source and AV devices such as DTVs.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

Connecting your TV and DVD player



The diagram shows a basic setup of this amplifier together with a TV and DVD player, with S-Video or composite video connections. Different TVs and DVD players may offer alternative connections. See also *Using the component video jacks* on page 24 if your TV and/or DVD player has component video inputs/outputs. If your DVD player offers multichannel analog audio outputs, see *Connecting the multichannel analog inputs* on page 60.

1 Connect the MONITOR OUT video jack to a video input on your TV.

Use a standard RCA/phono jack video cable to connect to the composite video jack, or for higher quality video, use an S-Video cable to connect to the S-Video jack.

2 Connect a composite or S-Video output on your DVD player to the DVD/LD VIDEO or DVD/LD S-VIDEO input.

Connect using a standard video cable or an S-Video cable.

3 Connect a coaxial-type[1] digital audio output on your DVD player to the COAXIAL IN 1 (DVD/LD) input.

Use a coaxial cable designed for digital audio.

4 Connect the stereo audio outputs on your DVD player to the DVD/LD AUDIO inputs.

Connect using a stereo RCA/phono jack cable.

- If your DVD player has multichannel analog outputs, you can connect these instead. See also *Connecting the multichannel analog inputs* on page 60.

5 If the source component is an LD player with a ◻◻ RF digital audio output, connect this to the RF IN input on this amplifier.

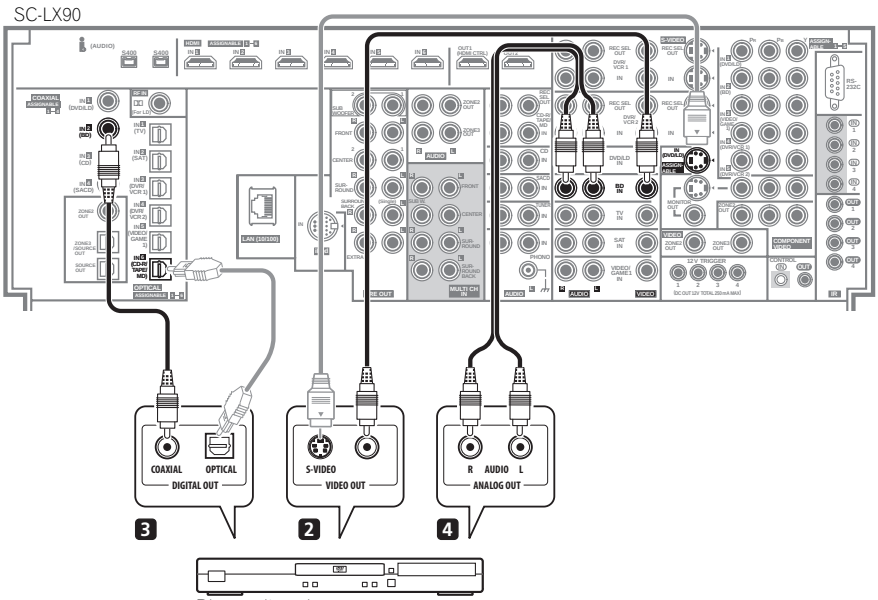
To ensure compatibility with all laserdiscs, connect both the **PCM** and **◻◻ RF** outputs from your LD player.

- Use a coaxial cable designed for digital audio for the **◻◻ RF** connection.
- You may need to assign the **RF IN** digital input when setting up the amplifier (see also *The Input Setup menu* on page 94).

Note

1 If your DVD player only has an optical digital output, you can connect it to one of the optical inputs on this amplifier using an optical cable. When you set up the amplifier you'll need to tell the amplifier which input you connected the player to (see *The Input Setup menu* on page 94).

Connecting your Blu-ray disc player



The diagram shows a basic setup of this amplifier together with a Blu-ray disc player, with S-Video or composite video connections. See also *Using the component video jacks* on page 24 if your Blu-ray disc player has component video inputs/outputs. If your Blu-ray disc player offers multi-channel analog audio outputs, see *Connecting the multichannel analog inputs* on page 60.

1 Connect a composite video output on your Blu-ray disc player to the BD VIDEO input.

Connect using a standard video cable or an S-Video[1] cable.

2 Connect an coaxial-type[2] digital audio output on your Blu-ray disc player to the COAXIAL IN 2 (BD) input.

Use a coaxial cable designed for digital audio.

3 Connect the stereo audio outputs on your Blu-ray disc player to the BD AUDIO inputs.

Connect using a stereo RCA/phono jack cable.

- If your Blu-ray disc player has multi-channel analog outputs, you can connect these instead. See also *Connecting the multichannel analog inputs* on page 60.

Note

1 See *The Input Setup menu* on page 94 to assign the **S-VIDEO** input to the BD input function if you make this connection.

2 If your Blu-ray disc player only has an optical digital output, you can connect it to one of the optical inputs on this amplifier using an optical cable. When you set up the amplifier, you'll need to tell the amplifier which input you connected the player to (see *The System Setup menu* on page 40).

Connecting a satellite/cable receiver or other set-top box

Satellite and cable receivers, and terrestrial digital TV tuners are all examples of so-called 'set-top boxes'.

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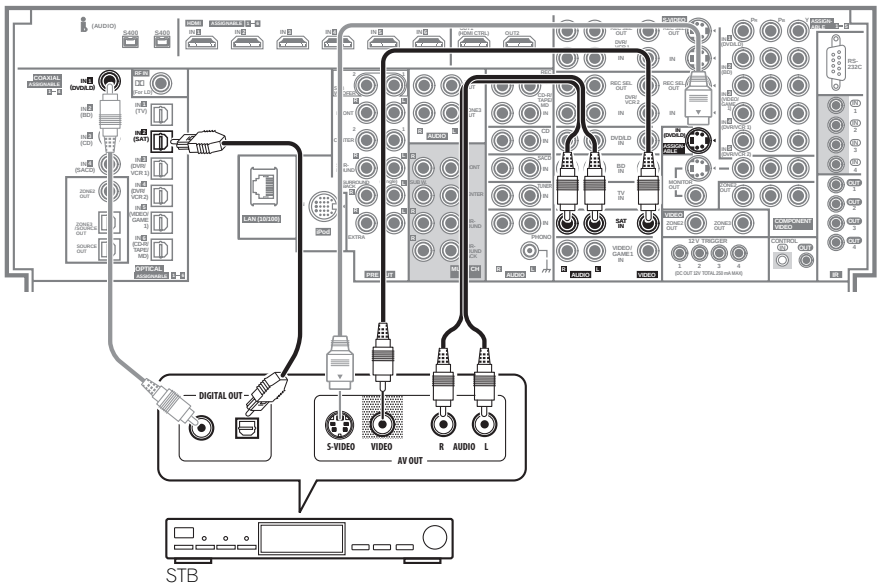


1 Connect the audio/video outputs on the set-top box to the SAT AUDIO and VIDEO inputs.

Connect using a stereo RCA/phono jack cable and a video or S-Video[1] cable.

2 Connect an optical-type[2] digital audio output from your set-top box to the OPTICAL IN 2 (SAT) input.[3]

Use an optical cable for the connection.

Note

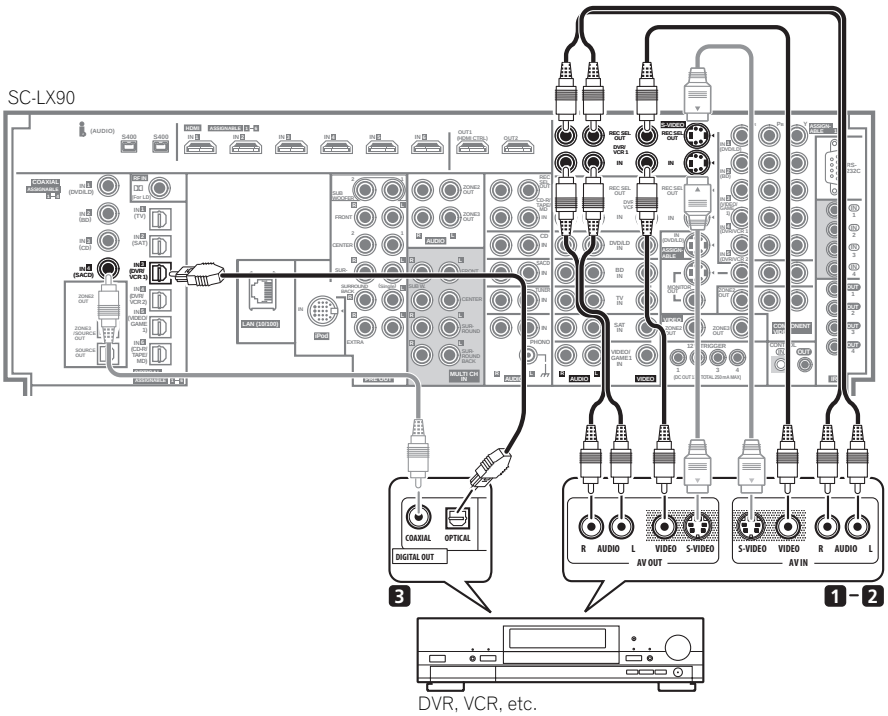
1 See *The Input Setup menu* on page 94 to assign the **S-VIDEO** input to the **SAT** input function if you make this connection.

2 If your set-top box only has a coaxial digital output, you can connect it to one of the coaxial inputs on this amplifier using a coaxial digital audio cable. When you set up the amplifier you'll need to tell the amplifier which input you connected the set-top box to (see *The Input Setup menu* on page 94).

3 If your satellite/cable receiver doesn't have a digital audio output, you can skip this step.

Connecting a DVD/HDD recorder, VCR and other video sources

This amplifier has two sets of audio/video inputs and outputs suitable for connecting analog or digital video devices, including DVD/HDD recorders and VCRs.



1 Connect the audio/video outputs of the video player/recorder to the DVR/VCR 1 AUDIO and VIDEO inputs.

Use a stereo RCA/phono jack audio cable for the audio connection and a video or S-Video cable for the video connection.

- For a second recorder, use the **DVR/VCR 2 IN** inputs.

2 If the device can record, connect the DVR/VCR 1 AUDIO and VIDEO outputs to the recorder's audio/video inputs.

Use a stereo RCA/phono jack audio cable for the audio connection and a video or S-Video cable for the video connection.

- For a second recorder, use the **DVR/VCR 2 OUT** outputs.

3 If the device can output digital audio, connect an optical-type[1] digital audio output from the recorder to the OPTICAL IN 3 (DVR/VCR 1) input.

Use an optical cable for the connection.[2]

- For a second recorder, use the **OPTICAL IN 4 (DVR/VCR 2)** input.

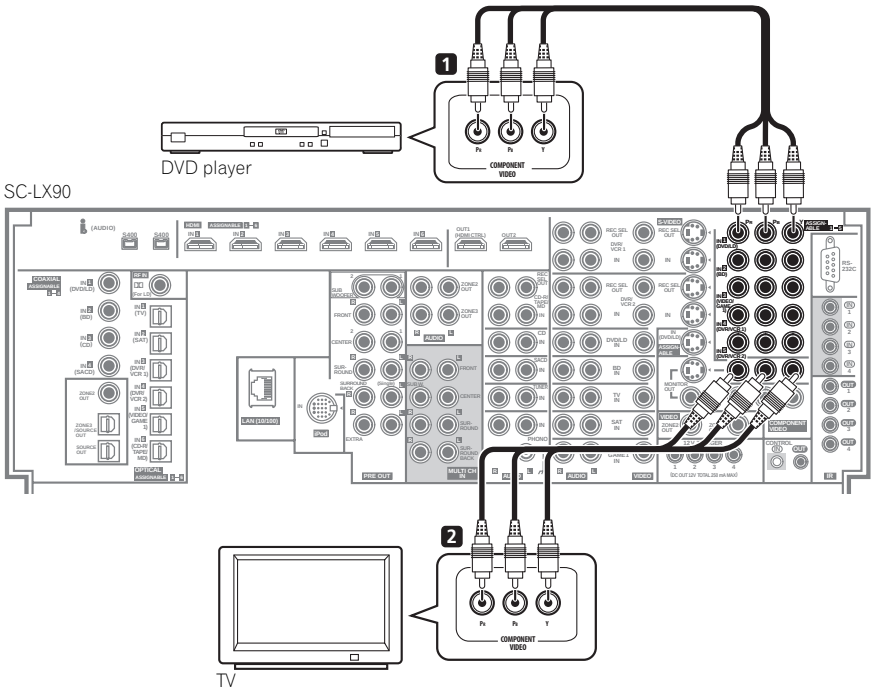
Note

1 • In order to record, you must connect the analog audio cables (the digital connection is for playback only).
• If your video component doesn't have a digital audio output, you can skip this step.

2 If your recorder only has a coaxial digital output, you can connect it to one of the coaxial inputs on this amplifier using a coaxial digital audio cable. When you set up the amplifier you'll need to tell the amplifier which input you connected the recorder to (see also *The Input Setup menu* on page 94).

Using the component video jacks

Component video should give superior picture quality when compared to composite or S-Video. You can also take advantage of progressive scan video (if your source and TV are both compatible), which delivers a very stable, flicker-free picture. See the manuals that came with your TV and source component to check whether they are compatible with progressive-scan video.



1 Connect the component video outputs of your source to a set of ASSIGNABLE COMPONENT VIDEO inputs.

Connect using a three-way component video cable.

- Since they are assignable, it doesn't matter which component video inputs you use for which source. After connecting everything, you'll need to assign the component video inputs—see *The Input Setup menu* on page 94.

2 Connect the COMPONENT VIDEO OUT jacks to the component video inputs on your TV or monitor.

Use a three-way component video cable.

Connecting digital audio sources

This amplifier has both digital inputs and outputs, allowing you to connect digital audio components for playback and for making digital recordings.

Most digital components also have analog connections. See *Connecting analog audio sources* on page 26 if you want to connect these too.

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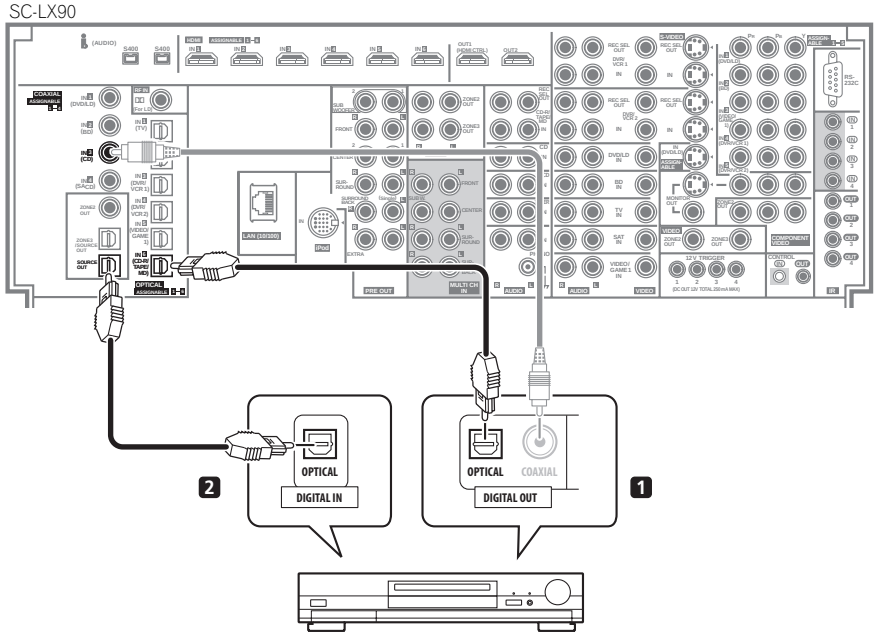


CD-R, MD, DAT, etc.

1 Connect an optical-type[1] digital audio output on your digital component to the OPTICAL IN 6 (CD-R/TAPE/MD) input.

Use an optical cable for the connection.

2 For recording equipment, connect one of the optical-type DIGITAL outputs to a digital input on the recorder.

Use an optical cable to connect to the **SOURCE OUT** or **ZONE3/SOURCE OUT**.[2]

About the WMA9 Pro decoder

This unit has an on-board Windows Media™ Audio 9 Professional[3] (WMA9 Pro) decoder, so it is possible to playback WMA9 Pro-encoded audio using a coaxial or optical digital connection when connected to a WMA9 Pro-compatible player. However, the connected PC, DVD player, set-top box, etc. must be able to output WMA9 Pro format audio signals through a coaxial or optical digital output.

Note

1 • If your digital component only has a coaxial digital output, you can connect it to one of the coaxial inputs on this amplifier using a coaxial cable. When you set up the amplifier you'll need to tell the amplifier which input you connected the component to (see also *The Input Setup menu* on page 94).
• The digital outputs from other components can be connected to any spare digital audio inputs on this amplifier. You can assign them when setting up the amplifier (see also *The Input Setup menu* on page 94).

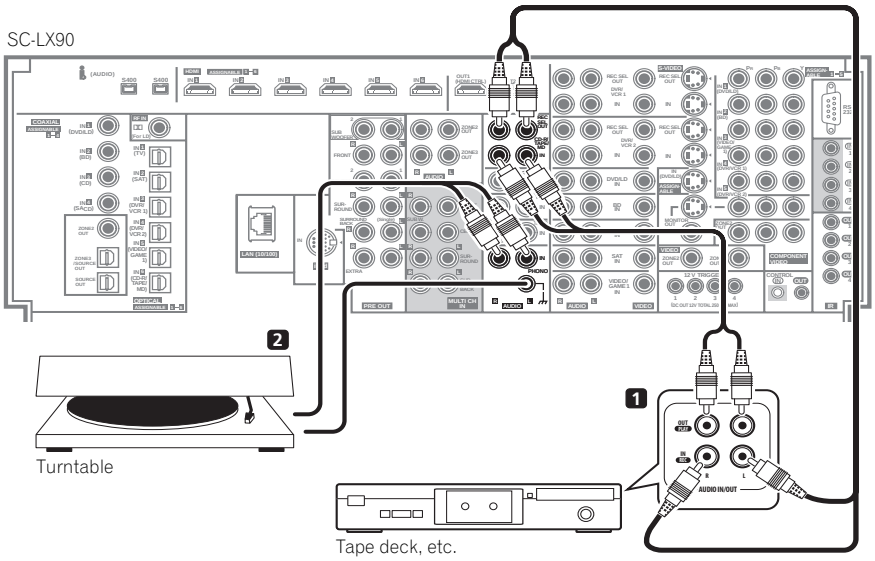
2 • You must switch **ZONE 3 ON** in *Using the MULTI-ZONE controls* on page 66 to hear audio from the **DIGITAL OUT1**.
• In order to record some digital sources, you must make analog connections as explained in *Connecting analog audio sources* on page 26.

3 • *Windows Media and the Windows logo are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.*
• With WMA9 Pro, sound problems may occur depending on your computer system. Note that WMA9 Pro 96 kHz sources will be downsampled to 48 kHz.

Connecting analog audio sources

This amplifier features five stereo audio-only inputs. One of these inputs have corresponding outputs for use with audio recorders.

One of the audio inputs (**PHONO**) is a dedicated turntable input which should not be used for any other type of component. This input also has a grounding terminal that most turntables require.



1 Connect the analog audio outputs of the source component to one of the AUDIO inputs.

Connect using a stereo RCA/phono jack audio cable.

- If you're connecting a tape deck, MD recorder, etc., connect the analog audio outputs (**RECSEL OUT**) to the analog audio inputs on the recorder.

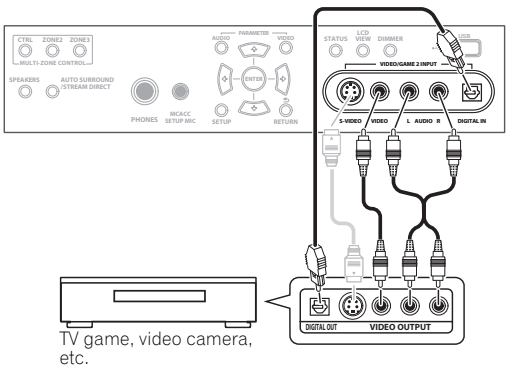
2 *Turntables only:* **Connect the stereo audio outputs to the PHONO inputs.**

- If your turntable has a grounding wire, secure it to the ground terminal on this amplifier.
- If your turntable has line-level outputs (i.e., it has a built-in phono pre-amp), connect it to the **CD** inputs instead.

Connecting a component to the front panel inputs

The front panel inputs comprise a composite video jack (**VIDEO**), an S-Video jack (**S-VIDEO**), stereo analog audio inputs (**AUDIO L/R**) and an optical digital audio input (**DIGITAL IN**). You can use these connections for any kind of audio/video component, but they are especially convenient for portable equipment such as camcorders, video games and portable audio/video equipment.

- Push down on the lower portion of the front panel door to access the front video connections.

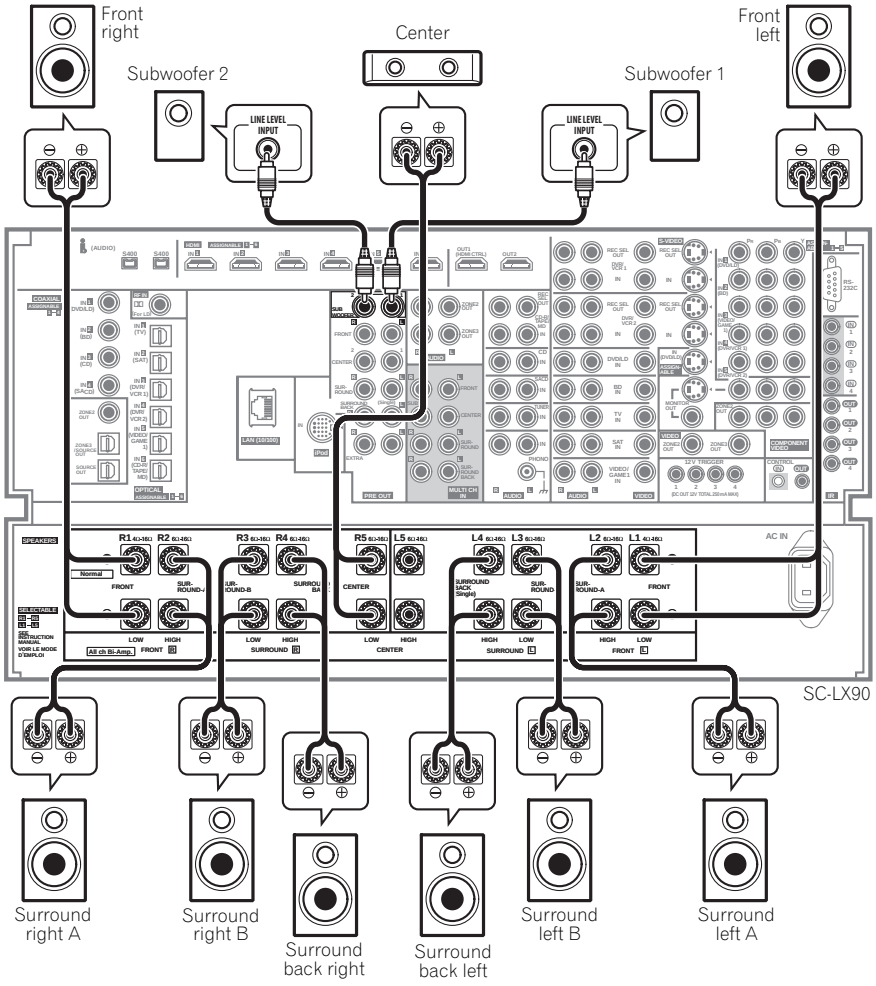


- Select these inputs using **INPUT SELECT** (remote) or the **INPUT SELECTOR** dial (front panel) to select **VIDEO/GAME 2**.

Installing your speaker system

To take full advantage of the amplifier's surround sound capabilities connect front, center, surround A, surround B and surround back speakers, as well as subwoofers.[1] Although this is ideal, other configurations with fewer speakers—no subwoofer or no center speaker, or even no surround speakers—will work. At the very least, front left and right speakers only are necessary. Note that your main surround speakers should always be connected as a pair, but you can connect just one surround back speaker if you like (it must be connected to the left surround back terminal). The following connections example is for 9.2-channel surround connections. Note that many other speaker layouts and usage patterns are also possible. For details see *Selecting the speaker layout/usage pattern* on page 9.

You can use speakers with a nominal impedance between 6 Ω and 16 Ω (or between 4 Ω and 16 Ω for the R1/L1 terminals).



Note

1 • When using one subwoofer, connect it to the SUBWOOFER 1 terminal.
• When using only one surround back speaker, connect it to the L4 (Single) terminals.
• When only two surround speakers are connected, connect them to the L2 (SL A) and R2 (SR A) terminals.

Connecting the speakers

Each speaker connection on the amplifier comprises a positive (+) and negative (–) terminal. Make sure to match these up with the terminals on the speakers themselves.

Caution

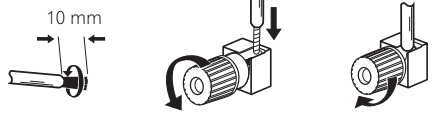
- These speaker terminals carry **HAZARDOUS LIVE voltage**. To prevent the risk of electric shock when connecting or disconnecting the speaker cables, disconnect the power cord before touching any uninsulated parts.
- Make sure that all the bare speaker wire is twisted together and inserted fully into the speaker terminal. If any of the bare speaker wire touches the back panel it may cause the power to cut off as a safety measure.

Bare wire connections

Make sure that the speaker cable you're going to use is properly prepared with about 10 mm of insulator stripped from each wire, and the exposed wire strands twisted together (*fig. A*).

To connect a terminal, unscrew the terminal a few turns until there is enough space to insert the exposed wire (*fig. B*). Once the wire is in position, tighten the terminal until the wire is firmly clamped (*fig. C*).

fig. A *fig. B* *fig. C*



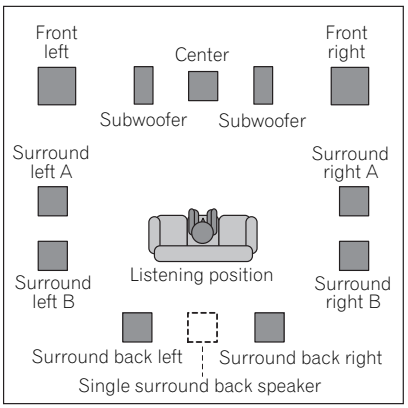
Important

- Please refer to the manual that came with your speakers for details on how to connect the other end of the speaker cables to your speakers.
- If you are using a THX certified subwoofer use the **THX INPUT** jack on the subwoofer (if your subwoofer has one) or switch the filter position to **THX** on your subwoofer.

Placing the speakers

Where you put your speakers in the room has a big effect on the quality of the sound. The following guidelines should help you to get the best sound from your system.

- The subwoofer can be placed on the floor. Ideally, the other speakers should be at about ear-level when you're listening to them. Putting the speakers on the floor (except the subwoofer), or mounting them very high on a wall is not recommended.
- For the best stereo effect, place the front speakers 2 m to 3 m apart, at equal distance from the TV.
- When placing speakers near the TV, we recommend using magnetically shielded speakers to prevent possible interference, such as discoloration of the picture when the TV is switched on. If you do not have magnetically shielded speakers and notice discoloration of the TV picture, move the speakers farther away from the TV.
- If you're using a center speaker, place the front speakers at a wider angle. If not, place them at a narrower angle.
- Place the center speaker above or below the TV so that the sound of the center channel is localized at the TV screen. Also, make sure the center speaker does not cross the line formed by the leading edge of the front left and right speakers.
- It is best to angle the speakers towards the listening position. The angle depends on the size of the room. Use less of an angle for bigger rooms.
- Surround and surround back speakers should be positioned 60 cm to 90 cm higher than your ears and titled slight downward. Make sure the speakers don't face each other. For DVD-Audio, the speakers should be more directly behind the listener than for home theater playback.
- Try not to place the surround speakers farther away from the listening position than the front and center speakers. Doing so can weaken the surround sound effect.
- To achieve the best possible surround sound, install your speakers as shown below. Be sure all speakers are installed securely to prevent accidents and improve sound quality.



Caution

- Make sure that all speakers are securely installed. This not only improves sound quality, but also reduces the risk of damage or injury resulting from speakers being knocked over or falling in the event of external shocks such as earthquakes.

The diagrams below show suggested surround and surround back speaker orientation. The first diagram (*fig. A*) shows orientation with one surround back speaker (or none) connected. The second (*fig. B*) shows orientation with two surround back speakers connected.

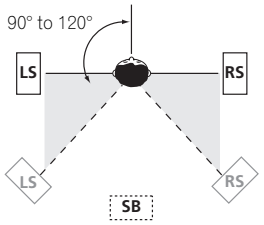


fig. A

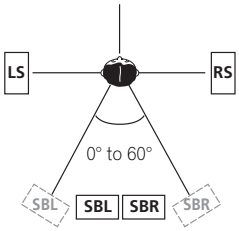
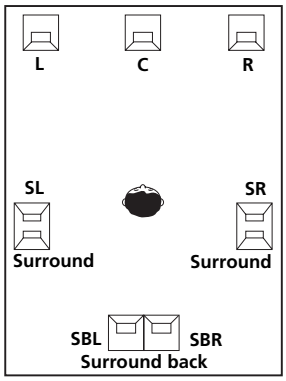


fig. B

- If you have two surround back speakers THX recommends placing them together and the same distance from your listening position (see below).

THX speaker system setup

If you have a complete THX speaker system, follow the diagram below to place your speakers. Note that the surround speakers (⧈ indicates bi-polar radiating speakers) should output at an angle parallel to the listener.



- If you have two surround back speakers THX recommends placing them together and the same distance from your listening position for the following THX modes: **THX Ultra2 CINEMA**, **THX Ultra2 MUSIC** and **THX Ultra2 GAMES**.

See also *THX Audio Setting* on page 54 to make the settings that will give you the best sound experience when using the Home THX modes (page 35).

Plugging in the amplifier

Only plug in after you have connected all your components to this amplifier, including the speakers.

1 Plug the supplied power cord into the AC IN socket on the back of the amplifier.

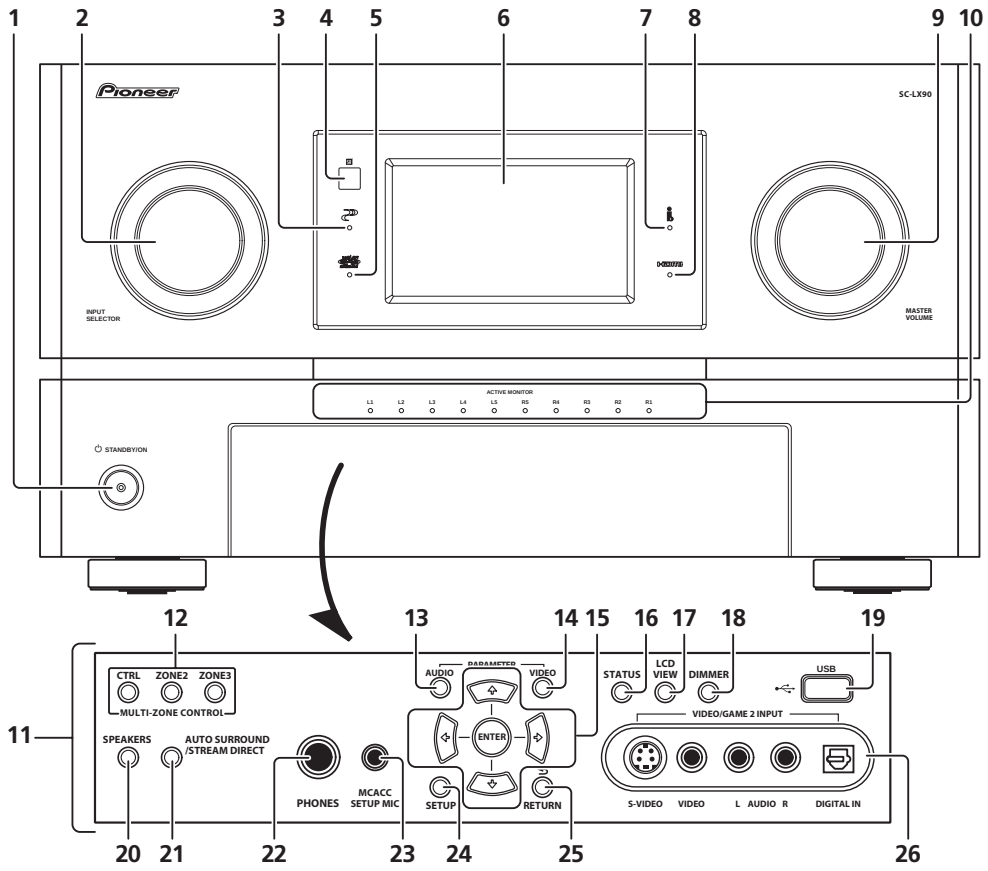
2 Plug the other end into a power outlet.

Caution

- Handle the power cord by the plug part. Do not pull out the plug by tugging the cord, and never touch the power cord when your hands are wet, as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, or other object on the power cord or pinch the cord in any other way. Never make a knot in the cord or tie it with other cables. The power cords should be routed so that they are not likely to be stepped on. A damaged power cord can cause a fire or give you an electric shock. Check the power cord once in a while. If you find it damaged, ask your nearest Pioneer authorized independent service company for a replacement.
- The amplifier should be disconnected by removing the mains plug from the wall socket when not in regular use, e.g., when on vacation.
- Make sure the blue ⏻ **STANDBY/ON** light has gone out before unplugging.

Chapter 4:
Controls and displays

Front panel



1 ⏻ STANDBY/ON
Switches the amplifier between on and standby. Power indicator lights when the amplifier is on.

2 INPUT SELECTOR dial
Use to select an input source.

3 PHASE CONTROL indicator
Lights to indicate Phase Control or Full Band Phase Control is selected (page 14).

4 Remote sensor
Receives the signals from the remote control (see *Operating range of remote control unit* on page 31).

5 ADVANCED MCACC indicator
Lights when one of the MCACC presets (page 37) is selected.[1]

6 LCD display

7 i.LINK indicator
Lights when an i.LINK-Audio-equipped component is selected (page 58).

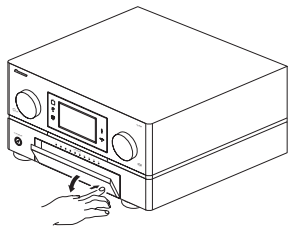
8 HDMI indicator
Blinks when connecting an HDMI-equipped component; lights when the component is connected (page 18).

Note
1 The MCACC indicator does not light when the MCACC preset memory currently being selected has not been corrected with Acoustic Calibration EQ Professional or when **EQ** is set to **OFF** in the **AUDIO PARAMETER** menu (see *Setting the Audio options* on page 99).

9 MASTER VOLUME dial

10 ACTIVE MONITOR indicator
The indicators of the speaker terminals compatible with sound output are lit.

11 Front panel controls
To access the front panel controls, push gently on the lower third portion of the panel with your finger.



12 MULTI-ZONE CONTROL
If you've made MULTI-ZONE connections (see *MULTI-ZONE listening* on page 64) use these controls to control the sub zone from the main zone (see *Using the MULTI-ZONE controls* on page 66).

13 AUDIO PARAMETER
Use to access the Audio options (page 99).

14 VIDEO PARAMETER
Use to access the Video options (page 101).

15 ↑/↓/←/→ /ENTER
Use the arrow buttons when setting up your surround sound system (see page 40).

16 STATUS
Information on the currently selected and set functions, the input signal, etc., is displayed on the LCD (page 104).

17 LCD VIEW
The information shown on the LCD can be switched in three steps (page 103).

18 DIMMER
Dims or brightens the LCD display (page 103).

19 USB interface
Connect a USB audio device for playback (page 73).

20 SPEAKERS
Use to change the speaker system (page 61).

21 AUTO SURROUND/STREAM DIRECT
Press to select Auto Surround (page 34) or Stream Direct (page 36) listening.

22 PHONES jack
Use to connect headphones. When the headphones are connected, there is no sound output from the speakers.

23 MCACC SETUP MIC jack
Use to connect the supplied microphone.

24 SETUP
Press to access the System Setup menu (page 40).

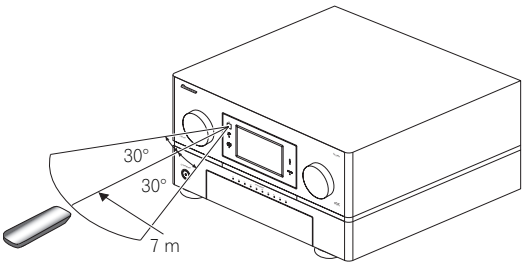
25 RETURN
Press to confirm and exit the current menu screen.

26 VIDEO/GAME 2 INPUT
See *Connecting a component to the front panel inputs* on page 26.

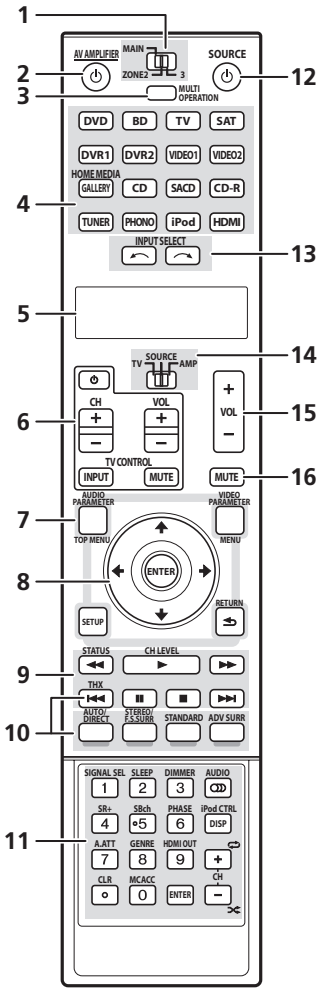
Operating range of remote control unit

The remote control may not work properly if:

- There are obstacles between the remote control and the amplifier's remote sensor.
- Direct sunlight or fluorescent light is shining onto the remote sensor.
- The amplifier is located near a device that is emitting infrared rays.
- The amplifier is operated simultaneously with another infrared remote control unit.



Remote control



The remote has been conveniently color-coded according to component control using the following system:

- **White** – amplifier control, TV Control
- **Blue** – Other controls

1 MULTI-ZONE operation selector switch
Switch to perform operations in the main zone, zone 2 and zone 3 (page 64).

2 AV AMPLIFIER⏻
This switches between standby and on for this amplifier.

3 MULTI OPERATION
Use this button to perform multi operations (page 108).

4 Input source buttons
Press to select control of other components (see *Controlling the rest of your system* on page 106).

5 Character display (LCD)
This display shows information when transmitting control signals.

The following commands are shown when you're setting the remote to control other components (see *Controlling the rest of your system* on page 106):

SETUP – Indicates the setup mode, from which you choose the options below.

PRESET – See *Selecting preset codes directly* on page 106.

LEARNING – See *Programming signals from other remote controls* on page 106.

MULTI OP – See *Multi Operation and System Off* on page 108.

SYS OFF – See *Multi Operation and System Off* on page 108.

DIRECT F – See *Direct function* on page 108.

RENAME – See *Renaming input source names* on page 108.

ERASE – See *Erasing one of the remote control button settings* on page 107.

RESET – See *Resetting the remote control presets* on page 107.

READ ID – See *Confirming preset codes* on page 108.

6 TV CONTROL buttons
These buttons are dedicated to control the TV assigned to the **TV** button. Thus if you only have one TV to hook up to this system assign it to the **TV** input source button (see page 106 for more on this).

TV⏻ – Use to turn on/off the power of the TV.

TV VOL +/– – Use to adjust the volume on your TV.

INPUT – Use to select the TV input signal.

TV CH +/– – Use to select channels.

MUTE – Use to mute the sound or cancel the mute mode.

7 Tuner/component control buttons/SETUP
These button controls can be accessed after you have selected the corresponding input source button (**DVD**, **DVR 1**, **TV**, etc.). Set the operation selector switch to **AMP** to access the following controls:

AUDIO PARAMETER – Use to access the Audio options (page 99).

VIDEO PARAMETER – Use to access the Video options (page 101).

SETUP – Use to access the System Setup menu (page 40).

RETURN – Press to confirm and exit the current menu screen (also use to return to the previous menu with DVDs or to select closed captioning with DTV).

8 ↑/↓/←/→ /ENTER
Use the arrow buttons when setting up your surround sound system (see page 40) and the Audio or Video options (page 99 or 101). Also used to control DVD menus/options and for deck 1 of a double cassette deck player.

9 Component control buttons
The main buttons (▶, ■, etc.) are used to control a component after you have selected it using the input source buttons.

The controls above these buttons can be accessed after you have selected the corresponding input source button (for example **DVD**, **DVR 1** or **TV**). The following controls can be accessed when set the operation selector switch to **AMP**.

STATUS – Press to check selected amplifier settings (page 104).

CH LEVEL – Press repeatedly to select a channel, then use ←/→ to adjust the level (page 53).

10 amplifier controls
STEREO/F.S.SURR – Switches between the stereo playback mode (page 36) and the Front Stage Surround Advance mode (page 36).

AUTO/DIRECT – Press to select Auto Surround (page 34) or Stream Direct (page 36) listening.

THX – Press to select a Home THX listening mode (page 35).

STANDARD – Press for Standard decoding and to switch between the various DD Pro Logic IIx and Neo:6 options (page 34).

ADV SURR – Use to switch between the various surround modes (page 35).

11 Number buttons and other amplifier/component controls
Use the number buttons to directly select the tracks on a CD, DVD, etc.

ENTER can be used to enter commands for TV or DTV.

After set the remote control operation switch to **AMP**:

SIGNAL SEL – Use to select an input signal (page 37).

SLEEP – Use to put the amplifier in sleep mode and select the amount of time before sleep (page 103).

DIMMER – Dims or brightens the display (page 103).

SR+ – Switches the SR+ mode on/off (page 69).

SBch – Use to select the surround/virtual back channel mode (page 37).

PHASE – Press to switch on/off Phase Control or Full Band Phase Control (page 14).

A.ATT – Attenuates (lowers) the level of an analog input signal to prevent distortion (page 103).

GENRE – Automatically selects the most appropriate Advanced Surround mode for the genre of the source currently being played back (this feature is available only when a Pioneer DVD recorder supporting HDMI Control is connected to this amplifier via HDMI) (page 39).

HDMI OUT – Switch the HDMI output terminal (page 103).

MCACC – Press to switch between MCACC presets (page 37).

12 SOURCE⏻
Press to turn on/off other components connected to the amplifier (see page 106 for more on this).

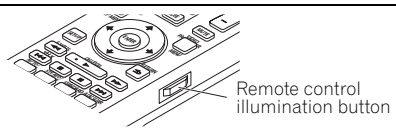
13 INPUT SELECT
Use to select the input source.

14 Remote control operation selector switch
Set to **AMP** to operate the amplifier, **TV** or **SOURCE** to operate the TV or the source device.

When this switch is set to **AMP**, the amplifier can be controlled (used to select the green commands above the number buttons (**A.ATT**, etc.). Also use this switch to set up surround sound (page 11, page 40).

15 VOL +/–
Use to set the listening volume.

16 MUTE
Mutes the sound or restores the sound if it has been muted (adjusting the volume also restores the sound).



On this amplifier's remote control, the illumination of some of the buttons and the LCD light when buttons are operated or the remote control operation selector switch is switched. They also light when the remote control illumination button is pressed, and turn off when the button is pressed again. This function is convenient when operating in dark rooms.
If you do not want the illumination to light when buttons are operated, press and hold in the remote control illumination button for 5 seconds to display **LIGHT_M2** on the LCD. To return to the original setting, press the remote control illumination button again for 5 seconds to display **LIGHT_M1** on the LCD.

Chapter 5:
Listening to your system

Important

- The listening modes and many features described in this section may not be available depending on the current source, settings and status of the amplifier. See *Listening modes with different input signal formats* on page 141 for more on this.

Auto playback

There are many ways to listen back to sources using this amplifier, but for the simplest, most direct listening option is the Auto Surround feature. The amplifier automatically detects what kind of source you're playing and selects multichannel or stereo playback as necessary.[1]

- **While listening to a source, press AUTO/DIRECT (AUTO SURROUND/STREAM DIRECT)[2] for auto playback of a source.**

AUTO SURROUND shows briefly in the display before showing the decoding or playback format. Check the digital format indicators in the front LCD display to see how the source is being processed.

Listening in surround sound

Using this amplifier, you can listen to any source in surround sound. However, the options available will depend on your speaker setup and the type of source you're listening to.

If you connected surround back speakers, see also *Using surround back channel processing* on page 37.

Standard surround sound

The following modes provide basic surround sound for stereo and multichannel sources.[3]

- **While listening to a source, press STANDARD.**

If necessary, press repeatedly to select a listening mode.

- If the source is Dolby Digital, DTS, or Dolby Surround encoded, the proper decoding format will automatically be selected and shows in the display.[4]

With two channel sources, you can select from:

- **DD Pro Logic IIx MOVIE** – Up to 7.1 channel sound, especially suited to movie sources
- **DD Pro Logic IIx MUSIC** – Up to 7.1 channel sound, especially suited to music sources[5]
- **DD Pro Logic IIx GAME**– Up to 7.1 channel sound, especially suited to video games
- **DD PRO LOGIC** – 4.1 channel surround sound (sound from the surround speakers is mono)
- **Neo:6 CINEMA** – 7.1 channel sound, especially suited to movie sources
- **Neo:6 MUSIC** – 7.1 channel sound, especially suited to music sources[6]
- **Neural THX** – Up to 7.1 channel sound, especially suited to music sources[7]

With multichannel sources, if you have connected surround back speaker(s) and have selected **SBch ON**, you can select (according to format):

- **DD Pro Logic IIx MOVIE** – See above (only available when you're using two surround back speakers)
- **DD Pro Logic IIx MUSIC** – See above
- **Dolby Digital EX** – Creates surround back channel sound for 5.1 channel sources and provides pure decoding for 6.1 channel sources (like Dolby Digital Surround EX)

Note

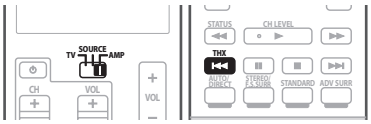
1 • Stereo surround (matrix) formats are decoded accordingly using **Neo:6 CINEMA** or **DD Pro Logic IIx MOVIE** (see *Listening in surround sound* above for more on these decoding formats).
• The Auto Surround feature is canceled if you connect headphones.
2 For more options using this button, see *Using Stream Direct* on page 36.
3 In modes that give 6.1 channel sound, the same signal is heard from both surround back speakers.
4 If surround back channel processing (page 37) is switched **OFF**, or the surround back speakers are set to **NO** (this happens automatically if the *Speaker output setting* on page 43 is set to **All Ch Bi-Amp**), **DD Pro Logic IIx** becomes **DD Pro Logic II** (5.2 channel sound).
5 When listening to 2-channel sources in Dolby Pro Logic IIx Music mode, there are three further parameters you can adjust: Center Width, Dimension, and Panorama. See *Setting the Audio options* on page 99 to adjust them.
6 When listening to 2-channel sources in Neo:6 Music mode, you can also adjust the center image effect (see *Setting the Audio options* on page 99).
7 **Neural THX** can be selected when the input signal is an analog or PCM signal.

- **DTS-ES** – Allows you to hear 6.1 channel playback with DTS-ES encoded sources
- **DTS Neo:6** – Allows you to hear 6.1 channel playback with DTS encoded sources

Using the Home THX modes

THX and Home THX are technical standards created by THX Ltd. for cinema and home theater sound. Home THX is designed to make home theater audio sound more like what you hear in a cinema.

Different THX options will be available depending on the source and the setting for surround back channel processing (see *Using surround back channel processing* on page 37 for more on this).



1 Set the operation selector switch to AMP.

2 Press THX to select a listening mode.[1]

With two channel sources, press **THX** repeatedly to select a matrix-decoding process for the **THX CINEMA** mode (see *Listening in surround sound* on page 34 for an explanation of each process):

- **DD Pro Logic IIx MOVIE+THX**
- **DD PRO LOGIC+THX CINEMA**
- **Neo:6 CINEMA+THX**
- **DD Pro Logic IIx MUSIC+THX**
- **Neo:6 MUSIC+THX**
- **DD Pro Logic IIx GAME+THX**
- **THX Ultra2 GAMES**

With multichannel sources, press **THX** repeatedly to select from:

- **THX Surround EX** – Allows you to hear 6.1 or 7.1 channel playback with 5.1 channel sources
- **DD Pro Logic IIx MOVIE+THX**
- **THX Ultra2 CINEMA** – Allows you to hear 7.1 channel playback with 5.1 channel sources
- **DD Pro Logic IIx MUSIC+THX**
- **THX Ultra2 MUSIC** – This mode is suited not only for sources recorded in Dolby Digital and DTS, but also to all multi-channel music sources (DVD-Audio, etc.).
- **THX Ultra2 GAMES** – This mode is suited to playing the sound of games.

Using the Advanced surround effects

The Advanced surround effects can be used for a variety of additional surround sound effects. Most Advanced Surround modes are designed to be used with film soundtracks, but some modes are also suited for music sources. Try different settings with various soundtracks to see which you like.

- **Press ADV SURR repeatedly to select a listening mode.[2]**
  - **ACTION** – Designed for action movies with dynamic soundtracks
  - **DRAMA** – Designed for movies with lots of dialog
  - **SCI-FI** – Designed for science fiction with lots of special effects
  - **MONOFILM** – Creates surround sound from mono soundtracks
  - **ENTERTAINMENT SHOW** – Suitable for musical sources
  - **EXPANDED THEATER** – Creates an extra wide stereo field[3]
  - **TV SURROUND** – Provides surround sound for both mono and stereo TV sources
  - **ADVANCED GAME** – Suitable for video games
  - **SPORTS** – Suitable for sports programs
  - **CLASSICAL** – Gives a large concert hall-type sound
  - **ROCK/POP** – Creates a live concert sound for rock and/or pop music
  - **UNPLUGGED** – Suitable for acoustic music sources
  - **EXTENDED STEREO** – Gives multichannel sound to a stereo source, using all of your speakers
  - **PHONES SURROUND** – When listening through headphones, you can still get the effect of overall surround.

Tip

- When an Advanced Surround listening mode is selected, the effect level can be adjusted using the **EFFECT** parameter in *Setting the Audio options* on page 99.

Note

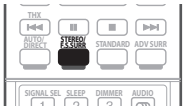
1 • If you only have one surround back speaker connected, **THX Ultra2 GAMES** is not available.
• You can't use the THX modes when headphones are connected.

2 • Depending on the source and the sound mode you have selected, you may not get sound from the surround back speakers in your setup. For more on this, refer to *Using surround back channel processing* on page 37.
• If you press **ADV SURR** when the headphones are connected, the **PHONES SURROUND** mode will automatically be selected.

3 Use with Dolby Pro Logic for a stereo surround effect (stereo field is wider than Standard modes with Dolby Digital sources).

Listening in stereo

When you select **STEREO**, you will hear the source through just the front left and right speakers (and possibly your subwoofer depending on your speaker settings). Dolby Digital, DTS and WMA9 Pro multichannel sources are downmixed to stereo.



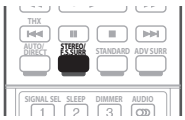
- **While listening to a source, press STEREO/F.S.SURR for stereo playback.**

Press repeatedly to switch between:

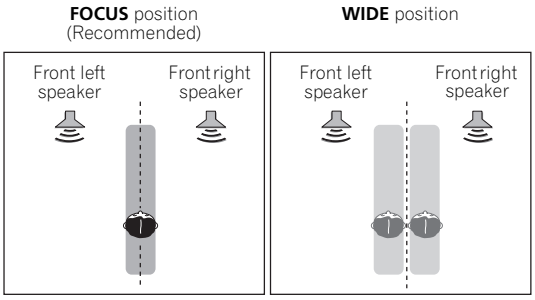
- **STEREO** – The audio is heard with your surround settings and you can still use the Midnight, Loudness, and Tone functions.
- **F.S.SURR FOCUS** – See *Using Front Stage Surround Advance* below for more on this.
- **F.S.SURR WIDE** – See *Using Front Stage Surround Advance* below for more on this.

Using Front Stage Surround Advance

The Front Stage Surround Advance function allows you to create natural surround sound effects using just the front speakers and the subwoofer.



- **While listening to a source, press STEREO/F.S.SURR to select Front Stage Surround Advance modes.**
  - **STEREO** – See *Listening in stereo* above for more on this.
  - **F.S.SURR FOCUS** – Use to provide a rich surround sound effect directed to the center of where the front left and right speakers sound projection area converges.
  - **F.S.SURR WIDE** – Use to provide a surround sound effect to a wider area than **FOCUS** mode.[1]



Using Stream Direct

Use the Stream Direct modes when you want to hear the truest possible reproduction of a source. All unnecessary signal processing is bypassed, and you're left with the pure analog or digital sound source (see *Stream direct with different input signal formats* on page 145).

1 **While listening to a source, press AUTO/DIRECT (AUTO SURROUND/STREAM DIRECT) to select the mode you want.**

Check the digital format indicators in the front LCD display to see how the source is being processed.

- **AUTO SURROUND** – See *Auto playback* on page 34.
- **DIRECT** – Sources are heard according to the settings made in the Surround Setup (speaker setting, channel level, speaker distance, acoustic calibration EQ, and X-curve), as well as with dual mono, the input attenuator, and any sound delay and hi-bit/hi-sampling settings. You will hear sources according to the number of channels in the signal.
- **PURE DIRECT** – Analog and PCM sources are heard without any digital processing.[2] When the speaker output setting is set to **7.2ch + Speaker B**, no sound is output from the Speaker B in this mode.

Note

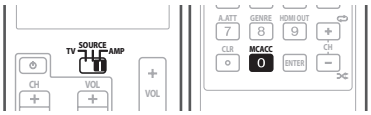
1 When using **F.S.SURR WIDE**, a better effect can be obtained if Auto MCACC Setup is performed. For more on this, refer to *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11.

2 There are cases where a brief noise is heard before playback of sources other than PCM. Please select **AUTO SURROUND** or **DIRECT** if this is a problem.

Selecting MCACC presets

- Default setting: **MEMORY 1**

If you have calibrated your system for different listening positions[1], you can switch between settings to suit the kind of source you're listening to and where you're sitting (for example, watching movies from a sofa, or playing a video game close to the TV).



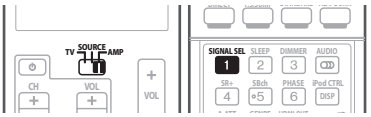
1 Set the operation selector switch to AMP.

2 While listening to a source, press MCACC.

Press repeatedly to select one of the six MCACC presets[2] or to switch calibration off. See *Data Management* on page 50 to check and manage your current settings.

Choosing the input signal

On this amplifier, it is possible to switch the input signals for the different inputs as described below.[3]



1 Set the operation selector switch to AMP.

2 Press SIGNAL SEL (SIGNAL SELECT) to select the input signal corresponding to the source component.

Each press cycles through the options as follows:

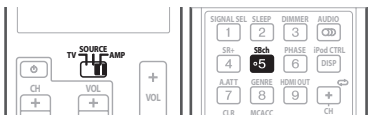
- **AUTO** – This is the default setting. The amplifier selects the first available signal in the following order: **i.**; **HDMI**; **DD RF**; **DIGITAL**; **ANALOG**.
- **ANALOG** – Selects an analog signal.
- **DIGITAL** – Selects an optical or coaxial digital signal.
- **DD RF** – Selects a **DD RF** signal.[4]
- **HDMI** – Selects an HDMI signal.[5]
- **i.** – Selects an i.LINK signal.
- **PCM** – Only PCM signals are output.[6] The amplifier selects the first available signal in the following order: **i.**; **HDMI**; **DIGITAL**.

Using surround back channel processing

- Default setting: **SBch ON**

You can have the amplifier automatically use 6.1 or 7.1 decoding for 6.1 encoded sources (for example, Dolby Digital EX or DTS-ES), or you can choose to always use 6.1 or 7.1 decoding (for example, with 5.1 encoded material). With 5.1 encoded sources, a surround back channel will be generated, but the material may sound better in the 5.1 format for which it was originally encoded (in which case, you can simply switch surround back channel processing off).

The table below indicates when you will hear the surround back channel when playing various kinds of sources (●=Sound plays through surround back speaker(s)).



Note

1 Different presets might also have separate calibration settings for the same listening position, depending on how you're using your system. These presets can be set in *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11 or *Automatic MCACC (Expert)* on page 40, either of which you should have already completed.

2 • These settings have no effect when headphones are connected.
• You can also press ←/→ to select the MCACC preset.

3 • This amplifier can only play back Dolby Digital, PCM (32 kHz to 192 kHz), DTS (including DTS 96 kHz / 24 bit) and WMA9 Pro digital signal formats. The compatible signals via the HDMI and i.LINK terminals are: Dolby Digital, DTS, WMA 9 Pro, PCM (32 kHz, 44.1 kHz, 88.2 kHz and 96 kHz sampling frequencies), Dolby TrueHD, Dolby Digital Plus, DTS-EXPRESS, DTS-HD Master Audio, SACD and DVD Audio (including 192 kHz). With other digital signal formats, set to **ANALOG** (the **MULTI CH IN**, **TUNER** and **PHONO**).
• You may get digital noise when a LD or CD player compatible with DTS is playing an analog signal. To prevent noise, make the proper digital connections (page 25) and set the signal input to **DIGITAL**.
• Some DVD players don't output DTS signals. For more details, refer to the instruction manual supplied with your DVD player.
• Even when i.LINK is selected and the i.LINK indicator lights, you won't hear any sound if the ouput settings of your i.LINK device are off.
• The input signal for unassigned i.LINK-equipped components is fixed to **i.**. See *Checking the i.LINK inputs* on page 59.

4 Make sure you connect your DVD/LD or LD players using the **RF IN** jack. If your player has a **DD RF** output this will ensure you can use all LDs. Refer to *Connecting your TV and DVD player* on page 20.

5 When the **HDMI** option in *Setting the Audio options* on page 99 is set to **THROUGH**, the sound will be heard through your TV, not from this amplifier.

6 • This is useful if you find there is a slight delay before **AUTO** recognizes the PCM signal on a CD, for instance.
• When **PCM** is selected, noise may be output during playback of non-PCM sources. Please select another input signal if this is a problem.

1 Set the operation selector switch to AMP.

2 Press SBch repeatedly to cycle the surround back channel options.[1]

Each press cycles through the options as follows:

- **SBch ON** – 6.1 or 7.1 decoding is always used (for example, a surround back channel will be generated for 5.1 encoded material)
- **SBch AUTO** – Automatically switches to 6.1 or 7.1 decoding for 6.1 encoded sources (for example, Dolby Digital EX or DTS-ES)
- **SBch OFF** – No sound is output from the surround back speakers

Using the Virtual Surround Back mode

When you're not using surround back speakers, selecting this mode allows you to hear a virtual surround back channel through your surround speakers. You can choose to listen to sources with no surround back channel information, or if the material sounds better in the format (for example, 5.1) for which it was originally encoded, you can have the amplifier only apply this effect to 6.1 encoded sources like Dolby Digital EX or DTS-ES.[2]

The table indicates when you will hear the virtual surround back channel (●=Virtual surround back channel is active).

- **Press SBch repeatedly to cycle the virtual surround back channel options.**

Each press cycles through the options as follows:

- **VirtualSB ON** – Virtual Surround Back is always used (for example, on 5.1 encoded material)
- **VirtualSB AUTO** – Virtual Surround Back is automatically applied to 6.1 encoded sources (for example, Dolby Digital EX or DTS-ES)
- **VirtualSB OFF** – Virtual Surround Back mode is switched off

Type of source	SBch Processing / Virtual SB mode	Standard / THX				Advanced surround
		Multichannel sources	Stereo sources			
			DD Pro Logic IIx	DD Pro Logic	Neo:6	
Dolby Digital EX/DTS-ES 5.1 ch sources with 6.1 ch flagged	**ON**	●				●
	AUTO	●				●
Dolby Digital/DTS and DVD-Audio 5.1 ch sources	**ON**	●				●
	AUTO	●[c]				●
Dolby Digital/DTS/PCM and DVD-Audio stereo sources	**ON**		●	●[a]	●	●
	AUTO		●[b]		●	●
Analog 2-channel (stereo) sources	**ON**		●	●[a]	●	●
	AUTO		●[b]		●	●
DTS-HD Master Audio/DTS-HD/Dolby Digital Plus/Dolby TrueHD/WMA9 Pro encoded and PCM 6.1 ch/7.1 ch sources	**ON**	●				●[d]
	AUTO	●				●[d]
Dolby Digital Plus/Dolby TrueHD/WMA9 Pro (44.1 kHz/48 kHz) encoded and PCM 5.1 ch sources	**ON**	●				●[d]
	AUTO	●[c]				●[d]
DTS-HD Master Audio/DTS-HD/ DTS-EXPRESS/WMA9 Pro (88.2 kHz/96 kHz) encoded 5.1 ch sources	**ON**	●[c]				●[d]
	AUTO	●[c]				●[d]

Note

1 By using a combination of surround back channel processing selection with speaker system selection it is possible to switch between a speaker configuration for high sound quality multi-channel music sources (DVD Audio discs, SACDs, etc.) and the speaker configuration recommended by THX for viewing movies. For details, see *Switching the speaker system according to the playback environment (Application Manual)* on page 62.

2 • You can't use the Virtual Surround Back mode when the headphones are connected to this amplifier or when any of the **THX**, stereo, Front Stage Surround Advance or Stream Direct mode is selected.

• You can only use the Virtual Surround Back mode if the surround speakers are on and the **SB** setting is set to **NO** in the *Speaker Setting* on page 52 or **All Ch Bi-Amp** is selected in the *Speaker output setting* on page 43.

• The Virtual Surround Back mode cannot be applied to sources that do not have surround channel information.

Type of source	SBch Processing / Virtual SB mode	Standard / THX				Advanced surround
		Multichannel sources	Stereo sources			
			◻◻ Pro Logic IIx	◻◻ Pro Logic	Neo:6	
Dolby Digital Plus/Dolby TrueHD/WMA9 Pro (44.1 kHz/48 kHz) encoded stereo sources	**ON**		●	●[a]		●[d]
	AUTO		●[b]			●[d]
DTS-HD Master Audio/DTS-HD/ DTS-EXPRESS/WMA9 Pro (88.2 kHz/96 kHz) encoded stereo sources	**ON**					
	AUTO					

a. Only applicable when using the Virtual Surround Back mode.
b. Not applicable when using the Virtual Surround Back mode.
c. Sound is output from the surround back speakers only when **THX Ultra2 CINEMA**, **THX MUSIC** or **THX GAMES** is selected.
d. Advanced surround mode may not be available depending on the input signal.

Using the genre synchronizing function

This feature automatically selects the most appropriate Advanced Surround mode for the source currently being played back on a Pioneer DVD recorder supporting HDMI Control connected to this amplifier via HDMI.[1] For details on HDMI Control, see *About HDMI* on page 19.

1 Set the operation selector switch to AMP.

2 Press GENRE while the source assigned to a genre is being played back.

The most appropriate Advanced Surround mode for the source being played back is automatically selected.

Note

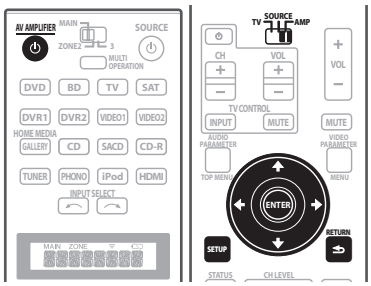
1 • This feature is available only when the source being played back is assigned to a genre. When the source has no genre assigned to, **NO GENRE** appears showing that this feature is not available.

• Make sure that HDMI Control is set to **ON**. When **OFF** is selected, **CANNOT SELECT** appears showing that this feature is not available (see *About HDMI* on page 19).

Chapter 6: The System Setup menu

Making amplifier settings from the System Setup menu

The following section shows you how to make detailed settings to specify how you're using the amplifier (for example, if you want to set up two speaker systems in separate rooms), and also explains how to fine-tune individual speaker system settings to your liking.



1 Switch on the amplifier and your TV.

Use the **AV AMPLIFIER**⏻ button to switch on.[1]

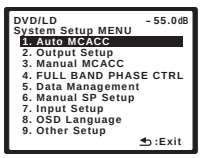
- If headphones are connected to the amplifier, disconnect them.

2 Set the operation selector switch to AMP, then press the SETUP button.[2]

An on-screen display (OSD) appears on your TV. Use the ⬆/⬇/⬅/➡ buttons and **ENTER** to navigate through the screens and select menu items. Press **RETURN** to confirm and exit the current menu.

- Press **SETUP** at any time to exit the System Setup menu.

3 Select the setting you want to adjust.



- **Auto MCACC** – See *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11 for a quick and effective automatic surround setup. See *Automatic MCACC (Expert)* below for a more detailed setup.
- **Output Setup** – Specifies how you are using your speaker terminals (see *Speaker output setting* on page 43).
- **Manual MCACC** – Fine-tunes your speaker settings and customize the Acoustic Calibration EQ (see *Manual MCACC setup* on page 44).
- **FULL BAND PHASE CTRL** – Calibrates and automatically corrects the frequency-phase characteristics of the speakers connected (see *Full Band Phase Control* on page 49).
- **Data Management** – Checks your MCACC presets and manages them through copying, renaming or deleting (see *Data Management* on page 50).
- **Manual SP Setup** – Specifies the size, number, distance and overall balance of the speakers you've connected (see *Manual speaker setup* on page 52).
- **Input Setup** – Specifies what you've connected to the digital, HDMI, component video and S-Video inputs (see *The Input Setup menu* on page 94).
- **OSD Language** – The OSD's display language can be changed (see *Changing the OSD display language (OSD Language)* on page 95).
- **Other Setup** – Makes customized settings to reflect how you are using the amplifier (see *The Other Setup menu* on page 96).

Automatic MCACC (Expert)

If your setup requires more detailed settings than those provided in *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11, you can customize your setup options below. You can calibrate your system differently for up to six different MCACC presets[3], which are useful if you have different listening positions depending on the type of source (for example, watching movies from a sofa, or playing a video game close to the TV).[4]

Note

1 Make sure not to switch off the power when using the System Setup menu.

2 • Note that when editing items in the Manual MCACC menu, you will need to first specify the MCACC preset you want to adjust by pressing **MCACC** before pressing **SETUP**.

• When the iPod or HOME MEDIA GALLERY input source is selected (in either the main or sub zone), or when using headphones, you can't use the System Setup menu. When you set **ZONE 2**, **ZONE 3** or **ZONE 2&3** to **ON** (page 66), you can't use the System Setup menu.

3 These are stored in memory and referred to as **MEMORY1** to **MEMORY6** until you rename them in *Data Management* on page 50.

4 You may also want to have separate calibration settings for the same listening position, depending on how you're using your system.

Important

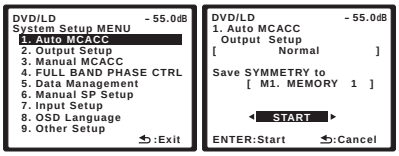
- Make sure the microphone/speakers are not moved during the Auto MCACC Setup.
- Using the Auto MCACC Setup will overwrite any existing settings for the MCACC preset you select.[1]
- The screen saver will automatically appear after three minutes of inactivity.

Caution

- The test tones used in the Auto MCACC Setup are output at high volume.

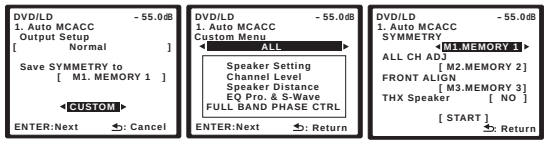
1 Select 'Auto MCACC' from the System Setup menu, then press ENTER.

If the System Setup screen is not displayed, refer to *Making amplifier settings from the System Setup menu* on page 40.



2 Make sure 'Normal' is selected,[2] select an MCACC preset[3], then select START.[4]

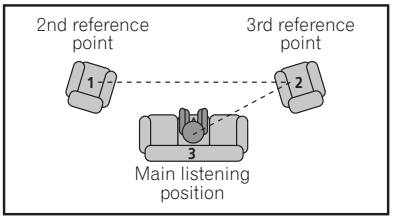
For a fully customized Auto MCACC setup, select **CUSTOM** and set the following parameters using ⬅/➡:[5]



- **Custom Menu** – The default is **ALL** (recommended), but you can limit the system calibration to only one setting (to save time) if you want.[6] The available options are **ALL**, **Keep SP System**,[7] **Speaker Setting**, **Channel Level**, **Speaker Distance** and **EQ Pro. & S-Wave**.
- **EQ Type** *(only available when the Custom Menu above is* **EQ Pro. & S-Wave***)* – This determines how the frequency balance is adjusted.

After a single calibration is performed, each of the following three correction curves can be stored separately in the MCACC memory. **SYMMETRY** (default) implements symmetric correction for each pair of left and right speakers to flatten the frequency-amplitude characteristics. **ALL CH ADJUST** is a 'flat' setting where all the speakers are set individually so no special weighting is given to any one channel. **FRONT ALIGN**[8] sets all speakers in accordance with the front speaker settings (no equalization is applied to the front left and right channels).

- **THX Speaker** *(only available when the Custom Menu above is* **ALL** *or* **Speaker Setting***)* – Select **YES** if you are using THX speakers (set all speakers to **SMALL**), otherwise leave it set to **NO**.
- **Stand.Wave Multi-Point** *(only available when the Custom Menu above is* **EQ Pro. & S-Wave***)* – In addition to measurements at the listening position, you can use two more reference points for which test tones will be analyzed for standing waves. This is useful if you want to get a balanced 'flat' calibration for several seating positions in your listening area.[9] Place the microphone at the reference point indicated on-screen and note *the last microphone placement will be at your main listening position:*



When you're finished settings the options, press **RETURN** to go back to the Auto MCACC main setup.

Note

1 Except in cases where you are only adjusting one parameter (i.e. channel level) from the **CUSTOM** setup screen (step 2).

2 If you are planning to select any options other than **Normal**, read through *Speaker output setting* on page 43 and make sure to connect your speakers as necessary before continuing to step 3.

3 The six MCACC presets are used for storing surround sound settings for different listening positions. Simply choose an unused preset for now (you can rename it later in *Data Management* on page 50).

4 Note that correction curves are saved only when set to **SYMMETRY**. Select **CUSTOM** to save other correction curves (such as **ALL CH ADJUST** and **FRONT ALIGN**).

5 Select **DEMO**, and then press **ENTER** to activate the demo mode of Auto MCACC. In the demo mode, no settings are saved and no errors occur. When the speakers are connected to this amplifier, the test tone is output repeatedly. Press **RETURN** to cancel the test tone.

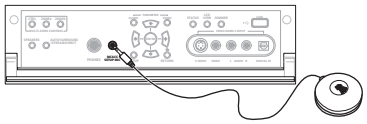
6 • The **EQ Pro. & S-Wave** measurement is also taken when **ALL** is selected. See *Acoustic Calibration EQ Professional* on page 47 for more on this.
• Either effect of Acoustic Calibration EQ Professional and Standing Wave can be switched on and off in the respective MCACC preset. For details, see *Setting the Audio options* on page 99.
• The **FULL BAND PHASE CTRL** measurement is also taken when **ALL** is selected. See *Full Band Phase Control* on page 49.

7 The **Keep SP System** option allows you to calibrate your system while leaving your current speaker setting (page 52) unchanged.

8 If you selected **ALL** as your **Custom Menu**, you can specify the MCACC preset where you want to save the **ALL CH ADJUST** and **FRONT ALIGN** settings.

9 Switch the **Multi-Point** setting **NO** if you only use one listening position.

3 Connect the microphone to the MCACC SETUP MIC jack on the front panel.
Make sure there are no obstacles between the speakers and the microphone.



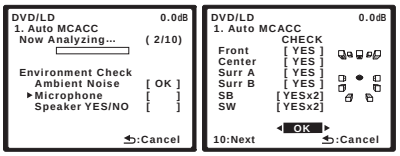
If you have a tripod, use it to place the microphone so that it's about ear level at your normal listening position. Otherwise, place the microphone at ear level using a table or a chair.

4 Follow the instructions on-screen.
- Make sure the microphone is connected.
- If you're using a subwoofer, it is automatically detected every time you switch on the system. Make sure it is on and the volume is turned up.
- See *Problems when using the Auto MCACC Setup* on page 13 for notes regarding high background noise levels and other possible interference.

5 Wait for the Auto MCACC Setup to finish outputting test tones.
A progress report is displayed on-screen while the amplifier outputs test tones to determine the speakers present in your setup. Try to be as quiet as possible while it's doing this.
- Do not adjust the volume during the test tones. This may result in incorrect speaker settings.
- With error messages (such as **Too much ambient noise!** or **Check Microphone**) select **RETRY** after checking for ambient noise (see *Problems when using the Auto MCACC Setup* on page 13) and verifying the mic connection. If there doesn't seem to be a problem, you can simply select **GO NEXT** and continue.

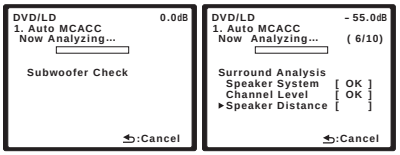
6 If necessary, confirm the speaker configuration in the OSD.[1]
The configuration shown on-screen should reflect the actual speakers you have.

If no operations are performed for 10 seconds while the speaker configuration check screen is being displayed, the Auto MCACC Setup will resume automatically. In this case, you don't need to select '**OK**' and press **ENTER** in step 7.



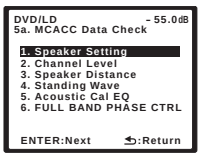
If you see an error message (**ERR**) in the right side column (or the speaker configuration displayed isn't correct), there may be a problem with the speaker connection. If selecting **RETRY** doesn't work, turn off the power and check the speaker connections. If there doesn't seem to be a problem, you can simply use ⬆/⬇ to select the speaker and ⬅/➡ to change the setting (and number for surround back) and continue.

7 Make sure 'OK' is selected, then press ENTER.
A progress report is displayed on-screen while the amplifier outputs more test tones to determine the optimum amplifier settings for channel level, speaker distance, and Acoustic Calibration EQ.



Again, try to be as quiet as possible while this is happening. It may take 3 to 7 minutes.
- If you selected a **Stand.Wave Multi-Point** setup (in step 2), you will be asked to place the mic at the 2nd and 3rd reference points before finally placing it at your main listening position.

8 The Auto MCACC Setup has finished! Press RETURN to go back to the System Setup menu.



Note
1 This screen is only shown if you selected **ALL** or **Speaker System** in **Custom Menu** from the Auto MCACC **CUSTOM** menu.

The settings made in the Auto MCACC Setup should give you excellent surround sound from your system, but it is also possible to adjust these settings manually using the System Setup menu (starting on page 40).[1]

You can also choose to view the settings by selecting individual parameters from the **MCACC Data Check** screen:

- **Speaker Setting** – The size and number of speakers you've connected (see page 52 for more on this)
- **Channel Level** – The overall balance of your speaker system (see page 44 or 53 for more on this)
- **Speaker Distance** – The distance of your speakers from the listening position (see page 45 or 54 for more on this)[2]
- **Standing Wave** – Filter settings to control lower 'boomy' frequencies (see page 46 for more on this)
- **Acoustic Cal EQ** – Adjustments to the frequency balance of your speaker system based on the acoustic characteristics of your room (see page 47 for more on this)
- **FULL BAND PHASE CTRL** – The original characteristics of group delay of the speakers calibrated and the targeted characteristics can be displayed graphically (see *Full Band Phase Control* on page 49 for more on this).

Press **ENTER** after you have finished checking each screen. When you're finished, select **RETURN** to go back to the System Setup menu.

Be sure to disconnect the microphone from this amplifier upon completion of the Auto MCACC setup.

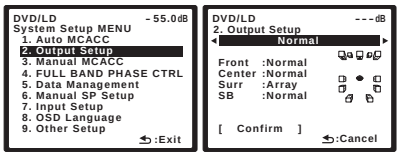
Speaker output setting

- Default setting: **Normal**

You can set the usage purpose for the ten channels worth of speaker terminals. One of five patterns can be selected according to the speaker layout and usage purpose (see *Selecting the speaker layout/usage pattern* on page 9).[3]

1 Select 'Output Setup' from the System Setup menu.

See *Making amplifier settings from the System Setup menu* on page 40 if you're not already at this screen.



The amplifier's volume is set to the minimum in order to protect the speakers.

2 Select the speaker setting.

- **Normal** – Select for "Normal surround connections".
- **All Ch Bi-Amp** – Select for "5.2-channel Bi-amp connections".
- **Front Bi-Amp** – Select for "7.2-channel front Bi-amp connections".
- **7.2ch+ZONE 2** – Select for "7.2-channel + Zone 2 connections".
- **7.2ch+Speaker B** – Select for "7.2-channel + speaker B connections".

3 Select 'Confirm'.

The layout of the speaker terminals for the selected item is displayed.

4 Check the layout of the output terminals, then select 'YES'.

The setting is made according to the selected item.

5 When you're finished, press RETURN.

You will return to the System Setup menu.

Note

1 • Depending on the characteristics of your room, sometimes identical speakers with cone sizes of around 12 cm will end up with different size settings. You can correct the setting manually using the *Manual speaker setup* on page 52.

• The subwoofer distance setting may be farther than the actual distance from the listening position. This setting should be accurate (taking delay and room characteristics into account) and generally does not need to be changed.

• If Auto MCACC Setup measurement results are incorrect due to the interaction of the speakers and viewing environment, we recommend adjusting the settings manually.

2 Since the distance measurements have been set according to the sound characteristics of your speakers, there are cases where (for optimal surround sound) the actual distance may differ from the speaker distance setting.

3 • When changing the speaker output settings, we recommend selecting the speaker layout/usage pattern first.

• All the MCACC memory settings are cleared when the speaker output settings are changed. Perform the Auto MCACC Setup procedure again after changing the speaker connections and speaker output settings (see page 11).

Manual MCACC setup

You can use the settings in the Manual MCACC setup menu to make detailed adjustments when you're more familiar with the system. Before making these settings, you should have already completed *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11.

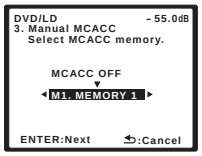
You only need to make these settings once (unless you change the placement of your current speaker system or add new speakers).

Caution

- The test tones used in the System Setup are output at high volume.

Important

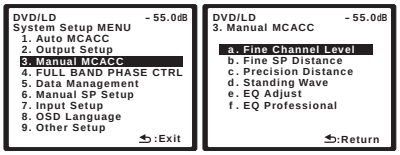
- You will need to first specify the MCACC preset you want to adjust by pressing **MCACC** before pressing **SETUP** (step 2 in *Making amplifier settings from the System Setup menu* on page 40). When Manual MCACC is selected while **MCACC** is set to **OFF**, the selection screen for the MCACC memory appears. Select a memory to adjust manually.



- For some of the settings below, you'll have to connect the setup microphone to the front panel and place it about ear level at your normal listening position. Press **SETUP** to display the System Setup menu before you connect the microphone to this amplifier. If the microphone is connected while the System Setup menu is not being displayed, the display will change to the Auto MCACC setup menu. See *Problems when using the Auto MCACC Setup* on page 13 for notes regarding high background noise levels and other possible interference.
- If you're using a subwoofer, switch it on and turn up the volume to the middle position.

1 Select 'Manual MCACC' from the System Setup menu.

See *Making amplifier settings from the System Setup menu* on page 40 if you're not already at this screen.



2 Select the setting you want to adjust.

If you're doing this for the first time, you might want to make these settings in order.

- **Fine Channel Level** – Make fine adjustments to the overall balance of your speaker system (see *Fine Channel Level* below).
- **Fine SP Distance** – Make precise delay settings for your speaker system (see *Fine Speaker Distance* on page 45).
- **Precision Distance** – Fine-adjusting the positions of the speakers (see *Fine-adjusting the positions of the speakers (Precision Distance)* on page 45).
- **Standing Wave** – Control overly resonant low frequencies in your listening room (see *Standing Wave* on page 46).

The last two settings are specifically for customizing the parameters explained in *Acoustic Calibration EQ Adjust* on page 47:

- **EQ Adjust** – Manually adjust the frequency balance of your speaker system while listening to test tones (see *Acoustic Calibration EQ Adjust* on page 47).
- **EQ Professional** – Calibrate your system based on the direct sound coming from the speakers and make detailed settings according to your room's reverb characteristics (see *Acoustic Calibration EQ Professional* on page 47).

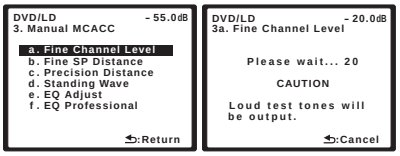
Fine Channel Level

- Default setting: **0.0dB** (all channels)

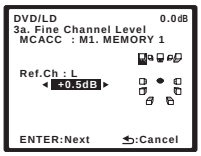
You can achieve better surround sound by properly adjusting the overall balance of your speaker system. The following setting can help you make detailed adjustments that you may not achieve using the *Manual speaker setup* on page 52.

1 Select 'Fine Ch Level' from the Manual MCACC setup menu.

The volume increases to the 0.0 dB reference level.

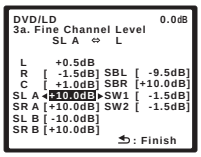


2 Adjust the level of the left channel.
This will be the reference speaker level, so you may want to keep the level around **0.0dB** so that you'll have plenty of room to adjust the other speaker levels.



- After pressing **ENTER**, test tones will be output.

3 Select each channel in turn and adjust the levels (+/–10dB) as necessary.
Use ⬅/➡ to adjust the volume of the speaker you selected to match the reference speaker. When it sounds like both tones are the same volume, press ⬇ to confirm and continue to the next channel.



- For comparison purposes, the reference speaker will change depending on which speaker you select.
- If you want to go back and adjust a channel, simply use ⬆/⬇ to select it.

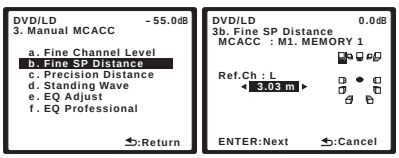
4 When you're finished, press RETURN.
You will return to the Manual MCACC setup menu.

Fine Speaker Distance

- Default setting: **3.00 m** (all speakers)

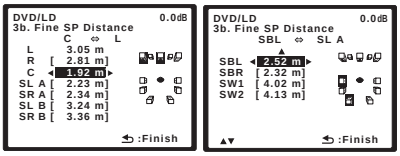
For proper sound depth and separation with your system, it is necessary to add a slight bit of delay to some speakers so that all sounds will arrive at the listening position at the same time. You can adjust the distance of each speaker in 1 cm increments. The following setting can help you make detailed adjustments that you may not achieve using the *Manual speaker setup* on page 52.

1 Select 'Fine SP Distance' from the Manual MCACC setup menu.

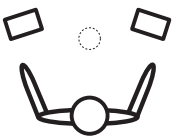


2 Adjust the distance of the left channel from the listening position.

3 Select each channel in turn and adjust the distance as necessary.
Use ⬅/➡ to adjust the delay of the speaker you selected to match the reference speaker. The delay is measured in terms of speaker distance from **0.01 m** to **9.00 m**.



Listen to the reference speaker and use it to measure the target channel. From the listening position, face the two speakers with your arms outstretched pointing at each speaker. Try to make the two tones sound as if they are arriving simultaneously at a position slightly in front of you and between your arm span.[1]



When it sounds like the delay settings are matched up, press ⬇ to confirm and continue to the next channel.

- For comparison purposes, the reference speaker will change depending on which speaker you select.
- If you want to go back and adjust a channel, simply use ⬆/⬇ to select it.

4 When you're finished, press RETURN.
You will return to the Manual MCACC setup menu.

Fine-adjusting the positions of the speakers (Precision Distance)

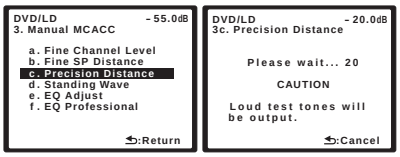
Before using this function, perform the Auto MCACC Setup procedure (see page 11). The auto MCACC speaker distance correction function corrects the distance to the speakers with a precision of 1 cm. Here, rather than correct the numerical value of the distance, actually move the physical positions of the speakers to fine-adjust (the subwoofer cannot be adjusted). The input from the microphone is indicated on the screen. Fine-adjust the positions of the speakers so that the gauge reading is maximum. The detailed distance adjustments that were previously performed by skilled installers by ear can easily be performed watching the gauge on the monitor.

Note

1 • If you can't seem to achieve this by adjusting the distance setting, you may need to change the angle of your speakers very slightly.
• For better audibility, the subwoofer emits a continuous test tone (oscillating pulses are heard from your other speakers). Note that it may be difficult to compare this tone with the other speakers in your setup (depending on the low frequency response of the reference speaker).

1 Select 'Precision Distance' from the Manual MCACC setup menu.

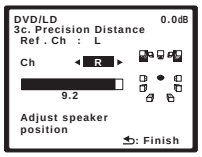
Determine this after connecting the setup microphone.



2 Fine-adjust the positions of the speakers in sequence, starting from the front right channel.[1]

Test tones are output from the speaker for the selected channel and from one other speaker. Move the position of the selected speaker to fine-adjust. Watch the screen when doing so, and fine-adjust the positions of the speakers so that the gauge reading is maximum. Also, the channel serving as the standard differs according to the channel being adjusted. Do not move the speaker serving as the standard channel.

The maximum gauge reading is 10.0. (If the reading stays under 10.0, adjust the speaker for the maximum value.)



3 When you're finished, press RETURN.

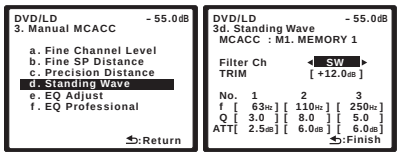
You will return to the Manual MCACC setup menu.

Standing Wave

- Default setting: **ON**[2]

Acoustic standing waves occur when, under certain conditions, sound waves from your speaker system resonate mutually with sound waves reflected off the walls in your listening area. This can have a negative effect on the overall sound, especially at certain lower frequencies. Depending on speaker placement, your listening position, and ultimately the shape of your room, it results in an overly resonant ('boomy') sound. The Standing Wave Control uses filters to reduce the effect of overly resonant sounds in your listening area. During playback of a source, you can customize the filters used for Standing Wave Control for each of your MCACC presets.[3]

1 Select 'Standing Wave' from the Manual MCACC setup menu.



2 Adjust the parameters for the Standing Wave Control.

- **Filter Ch** – Select the channel to which you will apply the filter(s): **MAIN** (all except center channel and subwoofer), **Center** or **SW** (subwoofer).
- **TRIM** *(only available when the filter channel above is* **SW***)* – Adjust the subwoofer channel level (to compensate for the difference in output post-filter).
- **f** / **Q** / **ATT** – These are the filter parameters where **f** represents the frequency you will be targeting and **Q** is the bandwidth (the higher the Q, the narrower the bandwidth, or range) of the attenuation (**ATT**, the amount of reduction to the targeted frequency).

3 When you're finished, press RETURN.

You will return to the Manual MCACC setup menu.

Note

1 • If the microphone is placed in a different position from when the Auto MCACC procedure was performed, it may not be possible to adjust properly. In this case, we recommend performing the procedure at *Fine Speaker Distance* on page 45 in the Auto MCACC custom measurements, then performing the adjustment described here without moving the microphone.

• The adjustment here is for adjusting for an error of 1 cm or less (not adjustable with the Auto MCACC Setup). 0.0 may be displayed after distance correction with the Auto MCACC Setup, but even in this case this adjustment allows you to optimize the correction. Note that if the Auto MCACC Setup is performed after completing the fine-adjustment here, the correction precision will drop to about 1 cm.

• Like with the Auto MCACC Setup, perform this adjustment in as quiet an environment as possible. 0.0 will be displayed if abrupt noise is input during the adjustment.

• The distance for all the channels can only be made uniform even if the **R** (front right) channel is adjusted in the proper order.

• Be very careful not to tip the speakers over when moving them.

• The result of the adjustment performed here can be checked by listening to the test pulses output at the *Fine-adjusting the positions of the speakers (Precision Distance)* on page 45 (the test pulses will be more centrally positioned between the speakers than before the adjustment was performed). Be careful not to change the distance values at this time.

2 You can switch on or off the Standing Wave feature in the **AUDIO PARAMETER** menu. See *Setting the Audio options* on page 99 for more on this.

3 • Since they will be overwritten, you may want to save the standing wave settings made with the Auto MCACC Setup to another MCACC preset.

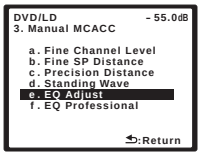
• Standing Wave control filter settings cannot be changed during playback of sources using the HDMI connection.

• When **Standing Wave** is selected for a MCACC preset memory where **STAND.WAVE** is set to **OFF** in the **AUDIO PARAMETER**, **STAND.WAVE ON** is automatically selected.

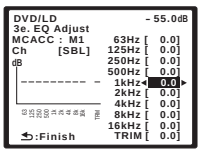
Acoustic Calibration EQ Adjust

Acoustic Calibration Equalization is a kind of room equalizer for your speakers (excluding the subwoofer). It works by measuring the acoustic characteristics of your room and neutralizing the ambient characteristics that can color the original source material (providing a 'flat' equalization setting). If you're not satisfied with the adjustment provided in *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11 or *Automatic MCACC (Expert)* on page 40, you can also adjust these settings manually to get a frequency balance that suits your tastes.[1]

1 Select 'EQ Adjust' from the Manual MCACC setup menu.



2 Select the channel(s) you want and adjust to your liking.



Use the ⬅/➡ buttons to select the channel.

Use the ⬆/⬇ buttons to select the frequency and ⬅/➡ to boost or cut the EQ. When you're finished, go back to the top of the screen and use the ⬅/➡ buttons to select the next channel.

- The **OVER!** indicator shows in the display if the frequency adjustment is too drastic and might distort. If this happens, bring the level down until **OVER!** disappears from the display.

Tip

- Changing the frequency curve of one channel too drastically will affect the overall balance. If the speaker balance seems uneven, you can raise or lower channel levels using test tones with the **TRIM** feature. Use ⬆/⬇ to select **TRIM**, then use ⬅/➡ to raise or lower the channel level for the current speaker.

3 When you're finished, press RETURN.

You will return to the Manual MCACC setup menu.

Acoustic Calibration EQ Professional

This setup minimizes the unwanted effects of room reverberation by allowing you to calibrate your system based on the direct sound coming from the speakers. It can also provide you with a graphical output of the frequency response of your room.[2]

How to use Acoustic Calibration EQ Professional

If you find that lower frequencies seem overly reverberant in your listening room (i.e. it sounds 'boomy'), or that different channels seem to exhibit different reverb characteristics, select **EQ Pro. & S-Wave** (or **ALL**) for the **Custom Menu** setting in *Automatic MCACC (Expert)* on page 40 to calibrate the room automatically. This should provide a balanced calibration that suits the characteristics of your listening room.

If you still aren't satisfied with the results, the manual Advanced EQ setup (below) provides a more customized calibration of your system using the direct sound of the speakers. This is done with the help of a graphical output that can be displayed on-screen, or using a computer (with software available from Pioneer — see *Connecting a PC for Advanced MCACC output* on page 69).

How to interpret the graphical output

The graph shows decibels on the vertical axis and time (in milliseconds) on the horizontal axis. A straight line indicates a flat-response room (no reverb), whereas a sloping line indicates the presence of reverberation when outputting test tones. The sloping line will eventually flatten out when the reverberant sound stabilizes (this usually takes about 100 ms or so).

By analyzing the graph, you should be able to see how your room is responding to certain frequencies. Differences in channel level and speaker distance are taken into account automatically (compensation is provided for comparison purposes), and the frequency measurements can be examined both with and without the equalization performed by this amplifier.[3]

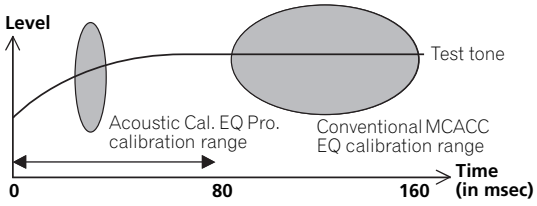
Note

1 When **EQ Adjust** is selected for a MCACC preset memory where **EQ** is set to **OFF** in the **AUDIO PARAMETER**, **EQ ON** is automatically selected.
2 This system allows you to customize your system calibration with the help of a graphical output that can be displayed on-screen, or using a computer (with software available from Pioneer—see *Connecting a PC for Advanced MCACC output* on page 69 for more on this).
3 Note that due to an effect known as 'group delay', lower frequencies will take longer to be generated than higher frequencies (this is most obvious when comparing the frequencies at 0 ms). This initial slope is not a problem (i.e. excessive reverb) with your listening room.

Setting Acoustic Calibration EQ Professional according to your room characteristics

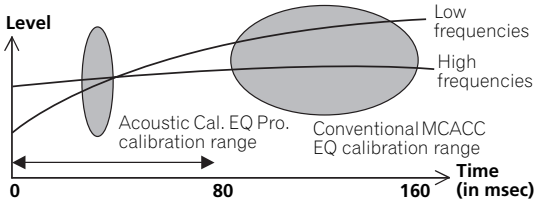
Using the manual setup, you can set the time period at which the frequency response is analyzed, pinpointing the time that is best for system calibration with your particular room characteristics.

The graph below shows the difference between conventional acoustic calibration and professional calibration (the gray circle indicates the point where the microphone captures sound during frequency analysis).

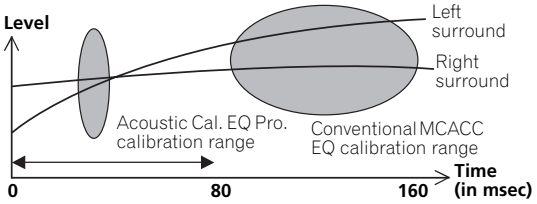


As soon as audio is output from your speaker system, it is influenced by room characteristics, such as walls, furniture, and the dimensions of the room. The sooner the frequency analysis, the less it is influenced by the room. We recommend an earlier time setting of **30~50ms** to compensate for two major factors that will influence the sound of most rooms:

- **Reverberance of high vs. low frequencies** – Depending on your room, you may find that lower frequencies seem overly reverberant compared to higher frequencies (i.e. your room sounds 'boomy'). This may result in a skewed frequency analysis if the measurement is done too late.



- **Reverb characteristics for different channels** – Reverb characteristics can be somewhat different for each channel. Since this difference increases as the sound is influenced by the various room characteristics, it is often better to capture a frequency analysis early on for smoother mixing of channel frequencies/sounds.

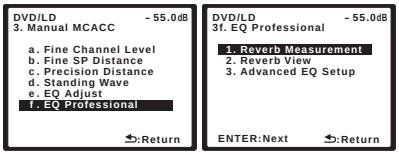


If your room isn't affected by the factors above, it is often not necessary to make a **30~50ms** setting. Later time settings may provide a more detailed sound experience with your speaker system. It is best to try and see what works best for your particular room.

Note that changing the room (for example, moving furniture or paintings) will affect the calibration results. In such cases, you should recalibrate your system.

Using Acoustic Calibration EQ Professional

1 Select 'EQ Professional', then press ENTER.



2 Select an option and press ENTER.

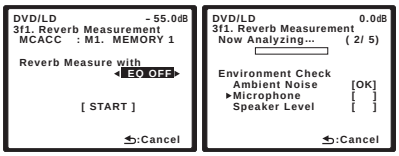
- **Reverb Measurement** – Use this to measure the reverb characteristics of your room (for graphical output using a PC, see *Connecting a PC for Advanced MCACC output* on page 69 to connect an RS-232C cable before selecting this option).
- **Reverb View** – You can check the reverb measurements made for specified frequency ranges in each channel.[1]

Note

1 If the Reverb View procedure is performed after the *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11 or Reverb Measurement operation, depending on the standing wave control setting, differences may appear on the reverb graph. With the Auto MCACC function, the reverberations are measured with the standing waves controlled, so the reverb characteristics graph shows the characteristics with the effect of the standing waves eliminated. By contrast, the Reverb Measurement function measures the reverberations without controlling the standing waves, so the graph indicates the reverb characteristics including the effect of the standing waves. If you wish to check the reverb characteristics of the room itself (with the standing waves as such), we recommend using the Reverb Measurement function.

- **Advanced EQ Setup** – Use this to select the time period that will be used for frequency adjustment and calibration, based on the reverb measurement of your listening area. Note that customizing system calibration using this setup will alter the settings you made in *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11 or *Automatic MCACC (Expert)* on page 40 and is not necessary if you're satisfied with these settings.

3 If you selected 'Reverb Measurement', select EQ ON or OFF, and then START.

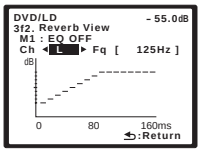


The following options determine how the reverb characteristics of your listening area are displayed in **Reverb View** and **Output PC** (**Data Management**):

- **EQ OFF** – You will see the reverb characteristics of your listening area *without* the equalization performed by this amplifier (before calibration).
- **EQ ON** – You will see the reverb characteristics of your listening area *with* the equalization performed by this amplifier (after calibration).[1] Note that the EQ response may not appear entirely flat due to adjustments necessary for your listening area.

When the reverb measurement is finished, you can select **Reverb View** to see the results on-screen. See *Professional Calibration EQ graphical output* on page 118 for troubleshooting information.

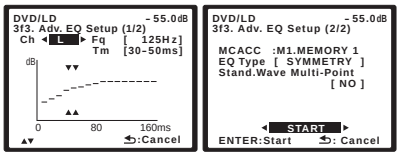
4 If you selected 'Reverb View', you can check the reverb characteristics for each channel. Press RETURN when you're done.



This appears according to the setting you chose in **Reverb Measurement** (step 3 above). Use the ⬅/➡ buttons to select the channel and the frequency you want to check. Use the ⬆/⬇ buttons to go back and forth between the two. Note that the markers on the vertical axis indicate decibels in 2 dB steps.

5 If 'Advanced EQ Setup' is selected, enter the desired time setting for calibration. Press ⬇ to proceed to the next screen, and then select START.

Based on the reverb measurement above, you can choose the time period that will be used for the final frequency adjustment and calibration. Even though you can make this setting without reverb measurement, it is best to use the measurement results as a reference for your time setting. For an optimal system calibration based on the direct sound coming from the speakers, we recommend using the **30~50ms** setting.



Use the ⬅/➡ buttons to select the channel, frequency, and time setting. Use the ⬆/⬇ buttons to switch between them.

You can switch between your connected speakers (excluding the subwoofer), and display the measurements for the following frequencies: **63Hz**, **125Hz**, **250Hz**, **500Hz**, **1kHz**, **2kHz**, **4kHz**, **8kHz** and **16kHz**.

Select the setting from the following time periods (in milliseconds): **0~20ms**, **10~30ms**, **20~40ms**, **30~50ms**, **40~60ms**, **50~70ms** and **60~80ms**. This setting will be applied to all channels during calibration.

When you're finished, select **START**. It will take about 2 to 4 minutes for the calibration to finish.

After the Acoustic Calibration Equalization is set, you are given the option to check the settings on-screen.

Full Band Phase Control

The Full Band Phase Control feature calibrates the frequency-phase characteristics of the speakers connected and corrects the phase distortion. This amplifier analyzes the frequency-phase characteristics of the speakers by calibrating test signals output from the speakers with the supplied microphone, therefore flattening the analyzed frequency-phase characteristics during audio signal playback. This correction minimizes group delay between the middle- and low-frequency ranges and improves the frequency-phase characteristics across all ranges. Furthermore, the enhanced frequency-phase characteristics between channels ensure better surround sound integration for multichannel sources. For details, see *Using Full Band Phase Control* on page 14.

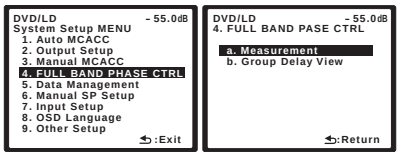
Note

1 The calibration corresponding to the currently selected MCACC preset will be used when **EQ ON** is selected. To use another MCACC preset, exit the System Setup menu and press **MCACC** to select it before pressing **SETUP**.

This section describes how to calibrate the frequency-phase characteristics of the speakers only. Once you have performed calibration with Auto MCACC set as a default setting or with **CUSTOM** set to **ALL**, the Full Band Phase Control calibration is already done (In this case, the previous settings are overwritten if you perform calibration again as described here).

1 Select 'FULL BAND PHASE CTRL' from the System Setup menu.

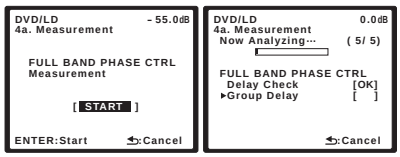
See *Making amplifier settings from the System Setup menu* on page 40 if you're not already at this screen.



2 Select an option and press ENTER.

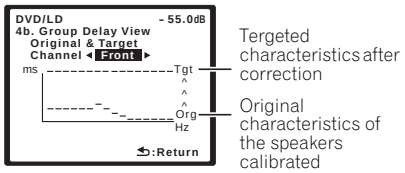
- **Measurement** – Calibrates and corrects the frequency-phase characteristics of each speaker.
- **Group Delay View** – The original characteristics of group delay of the speakers calibrated and the targeted characteristics can be displayed graphically.

3 If you selected 'Measurement', press ENTER.[1]



When the Full Band Phase Control measurement is finished, you can select **Group Delay View** to see the results on-screen.

4 If you selected 'Group Delay View', you can check the graph showing the group delay characteristics. Press RETURN, then you're done.[2]



This appears according to the setting you chose in **Measurement** (step 2 above). Use ⬅/➡ to select the channel you want to check.[3]

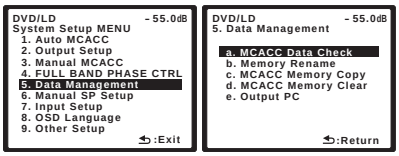
Data Management

This system allows you to store up to six MCACC presets, allowing you to calibrate your system for different listening positions (or frequency adjustments for the same listening position).[4] This is useful for alternate settings to match the kind of source you're listening to and where you're sitting (for example, watching movies from a sofa, or playing a video game close to the TV).

From this menu you can check your current settings, copy from one preset to another, name presets for easier identification and clear any ones you don't need.

1 Select 'Data Management' from the System Setup menu.

See *Making amplifier settings from the System Setup menu* on page 40 if you're not already at this screen.



2 Select the setting you want to adjust.

- **MCACC Data Check** – Check the settings for any of your MCACC presets using the on-screen display (see *Checking MCACC preset data* on page 51).
- **Memory Rename** – Name your MCACC presets for easy identification (see *Renaming MCACC presets* on page 51).
- **MCACC Memory Copy** – Copy settings from one MCACC preset to another (see *Copying MCACC preset data* on page 51).
- **MCACC Memory Clear** – Clear any MCACC presets that you don't want (see *Clearing MCACC presets* on page 51).
- **Output PC** – See *Connecting a PC for Advanced MCACC output* on page 69 for more on this.

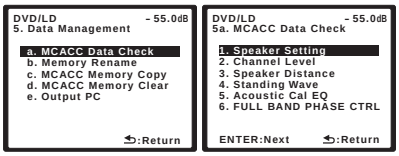
Note

1 When **Measurement** is selected and set and speaker phase disturbance is corrected, the Full Band Phase Control function automatically turns on.
2 When your PC is connected to this amplifier, the original characteristics of group delay of the speakers calibrated and the corrected characteristics of group delay can be displayed in 3-dimension on your PC.
3 The subwoofer is excluded from correction.The super tweeter in the super high-frequency range is excluded from correction. Also, speakers theoretically unaffected by group delay (full-range speakers, for instance) are excluded from correction. Because calibration involves the spatial characteristics, you may not get the same results after you perform calibration again depending on your audiovisual environment and your speaker system.
4 This can be done in *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11 or *Automatic MCACC (Expert)* on page 40, either of which you should have already completed.

Checking MCACC preset data

After you have completed *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11 or *Automatic MCACC (Expert)* on page 40, you can check your calibrated settings using the on-screen display.

1 Select 'MCACC Data Check' from the Data Management setup menu.

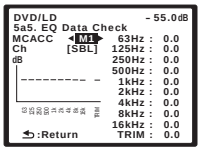


2 Select the setting you want to check.

- It is useful to do this while a source is playing so you can compare the different settings.

3 Select the MCACC preset that you want to check.

Use the ⬆/⬇ buttons if necessary to switch speakers/settings.



4 Press RETURN to go back to the Data Check menu, repeating steps 2 and 3 to check other settings.

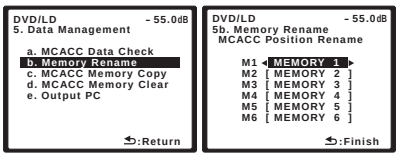
5 When you're finished, press RETURN.

You will return to the Data Management setup menu.

Renaming MCACC presets

If you have several different MCACC presets that you're using, you may want to rename them for easier identification.

1 Select 'Memory Rename' from the Data Management setup menu.



2 Select the MCACC preset you want to rename, then select an appropriate preset name.

Use ⬆/⬇ to select the preset, then ⬅/➡ to select a preset name.

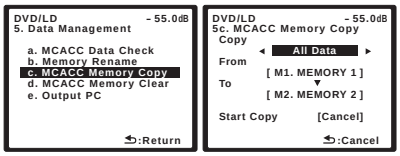
3 Repeat for as many MCACC presets as necessary, then press RETURN when you're finished.

You will return to the Data Management setup menu.

Copying MCACC preset data

If you want to manually adjust the Acoustic Calibration EQ (see *Manual MCACC setup* on page 44), we recommend copying your current settings[1] to an unused MCACC preset. Instead of just a flat EQ curve, this will give you a reference point from which to start.

1 Select 'MCACC Memory Copy' from the Data Management setup menu.



2 Select the setting you want to copy.

- **All Data** – Copies all the settings of the selected MCACC preset memory.
- **LEVEL & DISTANCE** – Copies only the channel level and speaker distance settings of the selected MCACC preset memory.

3 Select the MCACC preset you'll be copying the settings 'From', then specify where you want to copy them ('To').

Make sure you don't overwrite an MCACC preset you're currently using (this can't be undone).

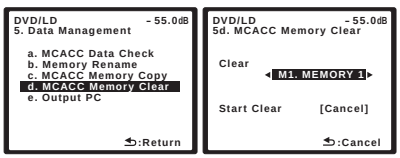
4 Select 'OK' to confirm and copy the settings.

Completed shows in the OSD to confirm the MCACC preset has been copied, then you automatically return to the Data Management setup menu.

Clearing MCACC presets

If you are no longer using one of the MCACC presets stored in memory, you can choose to clear the calibration settings of that preset.

1 Select 'MCACC Memory Clear' from the Data Management setup menu.



2 Select the MCACC preset you want to clear.

Make sure you don't clear an MCACC preset you're currently using (this can't be undone).

3 Select 'OK' to confirm and clear the preset.

Completed shows in the OSD to confirm the MCACC preset has been cleared, then you automatically return to the Data Management setup menu.

Note

1 The settings made in *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11 or *Automatic MCACC (Expert)* on page 40.

Manual speaker setup

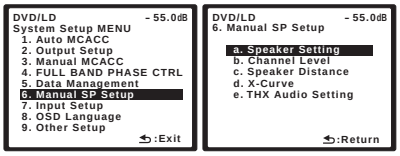
This amplifier allows you to make detailed settings to optimize the surround sound performance. You only need to make these settings once (unless you change the placement of your current speaker system or add new speakers).

These settings are designed to customize your system, but if you're satisfied with the settings made in *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11, it isn't necessary to make all of these settings.

Caution

- The test tones used in the System Setup are output at high volume.

1 Select 'Manual SP Setup', then press ENTER.



2 Select the setting you want to adjust.

If you are doing this for the first time, you may want to adjust these settings in order:

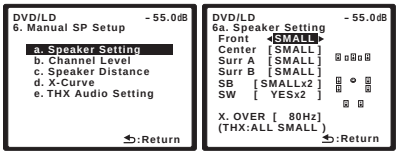
- **Speaker Setting** – Specify the size and number of speakers you've connected (see below).
- **Channel Level** – Adjust the overall balance of your speaker system (page 53).
- **Speaker Distance** – Specify the distance of your speakers from the listening position (page 54).
- **X-Curve** – Adjust the tonal balance of your speaker system for movie soundtracks (page 54).
- **THX Audio Setting** – Specify whether you are using a THX speaker setup (page 54).

3 Make the adjustments necessary for each setting, pressing RETURN to confirm after each screen.

Speaker Setting

Use this setting to specify your speaker configuration (size, number of speakers and crossover frequency). It is a good idea to make sure that the settings made in *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11 are correct.[1] Note that this setting applies to all MCACC presets, and cannot be set independently.

1 Select 'Speaker Setting' from the Manual SP Setup menu.



2 Choose the set of speakers that you want to set, then select a speaker size.

Use ⬅/➡ to select the size (and number) of each of the following speakers:[2]

- **Front** – Select **LARGE** if your front speakers reproduce bass frequencies effectively, or if you didn't connect a subwoofer. Select **SMALL** to send the bass frequencies to the subwoofer.
- **Center** – Select **LARGE** if your center speaker reproduces bass frequencies effectively, or select **SMALL** to send bass frequencies to the other speakers or subwoofer. If you didn't connect a center speaker, choose **NO** (the center channel is sent to the front speakers).
- **Surr**[3] – Select **LARGE** if your surround speakers reproduce bass frequencies effectively. Select **SMALL** to send bass frequencies to the other speakers or subwoofer. If you didn't connect surround speakers choose **NO** (the sound of the surround channels is sent to the front speakers or a subwoofer).
- **SB** – Select the number of surround back speakers you have (one, two or none).[4] Select **LARGE** if your surround back speakers reproduce bass frequencies effectively. Select **SMALL** to send bass frequencies to the other speakers or subwoofer. If you didn't connect surround back speakers choose **NO**.

Note

1 If you're using a THX speaker setup, set all speakers to **SMALL**.

2 If you select **SMALL** for the front speakers the subwoofer will automatically be fixed to **YES**. Also, the center and surround speakers can't be set to **LARGE** if the front speakers are set to **SMALL**. In this case, all bass frequencies are sent to the subwoofer.

3 **Surr A** and **Surr B** can be set when **Output Setup** is set to **Normal**.

4 • If you selected **All Ch Bi-Amp** (in *Speaker output setting* on page 43) you can't adjust the surround back settings.
• If the surround speakers are set to **NO**, the surround back speakers will automatically be set to **NO**.
• If you select one surround back speaker only, make sure that speaker is hooked up to the left surround back terminal.

- **SW** – Select the number of subwoofer you have (one or two). LFE signals and bass frequencies of channels set to **SMALL** are output from the subwoofer when **YES** is selected. Choose the **PLUS** setting if you want the subwoofer to output bass sound continuously or you want deeper bass (the bass frequencies that would normally come out the front and center speakers are also routed to the subwoofer).[1] If you did not connect a subwoofer choose **NO** (the bass frequencies are output from other speakers).

3 Select 'X. OVER' and set the crossover frequency.[2]
Frequencies below this point will be sent to the subwoofer (or **LARGE** speakers).

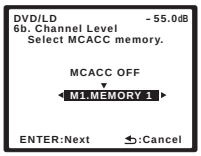
4 When you're finished, press RETURN.
You will return to the Manual SP Setup menu.

Channel Level

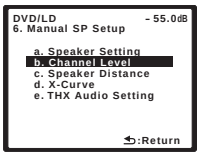
Using the channel level settings, you can adjust the overall balance of your speaker system, an important factor when setting up a home theater system.

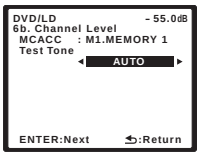
Important

- When Channel Level is selected while **MCACC** is set to **OFF**, the selection screen for the MCACC memory appears. Select a memory to adjust manually.



1 Select 'Channel Level' from the Manual SP Setup menu.

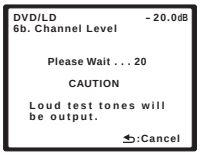




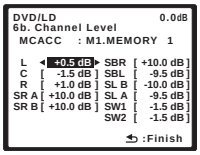
2 Select a setup option.

- **MANUAL** – Move the test tone manually from speaker to speaker and adjust individual channel levels.
- **AUTO** – Adjust channel levels as the test tone moves from speaker to speaker automatically.

3 Confirm your selected setup option.
The test tones will start after you press **ENTER**.



4 Adjust the level of each channel using the ⬅/➡ buttons.
If you selected **MANUAL**, use ⬆/⬇ to switch speakers. The **AUTO** setup will output test tones in the order shown on-screen:



Adjust the level of each speaker as the test tone is emitted.[3]

5 When you're finished, press RETURN.
You will return to the Manual SP Setup menu.

Tip

- The channel level can be changed at any time. Set the operation selector switch to **AMP**, then press **CH LEVEL** on the remote control, and then use ⬅/➡ to adjust the level.

Note

1 If you have a subwoofer and like lots of bass, it may seem logical to select **LARGE** for your front speakers and **PLUS** for the subwoofer. This may not, however, yield the best bass results. Depending on the speaker placement of your room you may actually experience a decrease in the amount of bass due low frequency cancellations. In this case, try changing the position or direction of speakers. If you can't get good results, listen to the bass response with it set to **PLUS** and **YES** or the front speakers set to **LARGE** and **SMALL** alternatively and let your ears judge which sounds best. If you're having problems, the easiest option is to route all the bass sounds to the subwoofer by selecting **SMALL** for the front speakers.

2 • This setting decides the cutoff between bass sounds playing back from the speakers selected as **LARGE**, or the subwoofer, and bass sounds playing back from those selected as **SMALL**. It also decides where the cutoff will be for bass sounds in the LFE channel.

• If you're using a THX speaker setup, confirm that the crossover frequency is set to **80Hz**.

3 • If you are using a Sound Pressure Level (SPL) meter, take the readings from your main listening position and adjust the level of each speaker to 75 dB SPL (C-weighting/slow reading).

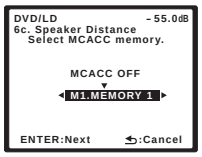
• The subwoofer test tone is output at low volumes. You may need to adjust the level after testing with an actual soundtrack.

Speaker Distance

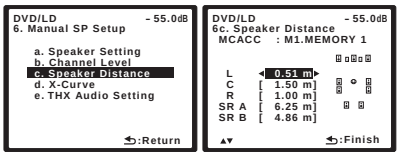
For good sound depth and separation from your system, you need to specify the distance of your speakers from the listening position. The amplifier can then add the proper delay needed for effective surround sound.

Important

- When Speaker Distance is selected while **MCACC** is set to **OFF**, the selection screen for the MCACC memory appears. Select a memory to adjust manually.



1 Select 'Speaker Distance' from the Manual SP Setup menu.



2 Adjust the distance of each speaker using the ⬅/➡ buttons.

You can adjust the distance of each speaker in 0.01 m increments.

3 When you're finished, press RETURN.

You will return to the Manual SP Setup menu.

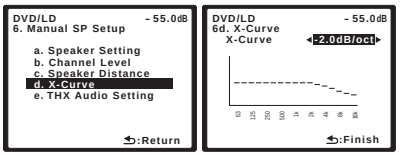
Tip

- For best surround sound, make sure the surround back speakers are the same distance from the listening position.

X-Curve

Most soundtracks mixed for cinema sound too bright when played back in large rooms. The X-Curve setting acts as a kind of re-equalization for home theater listening, and restores proper tonal balance of movie soundtracks.[1]

1 Select 'X-Curve' from the Manual SP Setup menu.



2 Choose the X-Curve setting you want.

Use ⬅/➡ to adjust the setting. The X-Curve is expressed as a downwards slope in decibels per octave, starting at 2 kHz. The sound becomes less bright as the slope increases (to a maximum of **-3.0dB/oct**). Use the following guidelines to set the X-Curve according to your room size:

Room size (m^2)	≤36	≤48	≤60	≤72	≤300	≤1000
X-Curve (dB/oct)	–0.5	–1	–1.5	–2	–2.5	–3

- If you select **OFF**, the frequency curve will be flat and the X-Curve has no effect.

3 When you're finished, press RETURN.

THX Audio Setting

When the THX Loudness Plus function is used, sound can be played with the full surround effect even when the volume is low.

With some speaker setups, depending on the position of the subwoofer and the walls in your listening area, you may experience overly resonant frequencies in the bass. If you have this problem use the THX Ultra2 subwoofer setup to switch on boundary gain compensation (see *About THX* on page 127 for more on this).

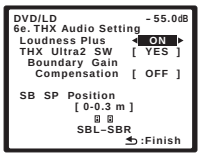
For the most effective results when using the THX Ultra2 Cinema, THX Ultra2 Music Mode and THX Ultra2 Games Mode listening modes (see *Using the Home THX modes* on page 35) with the Advanced Speaker Array (ASA) system (see *About THX* on page 127), it is required that you make the setting. See *Placing the speakers* on page 28 for more on THX speaker placement.[2]

Note

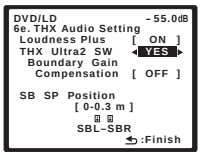
1 Since the principal is the same, X-Curve isn't applied when you're using any of the Home THX modes (see *Using the Home THX modes* on page 35).
2 If you don't have surround back speakers, or just have one, or you select **All Ch Bi-Amp** in **Output Setup**, you won't be able to select this setting.

1 Select 'THX Audio Setting' from the Manual SP Setup menu.

2 Select either ON or OFF for THX Loudness Plus setting.

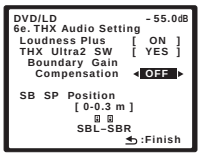


3 Specify whether your subwoofer is THX Ultra2 certified or not.

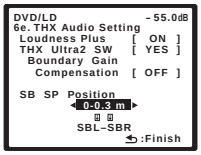


If your subwoofer isn't THX Ultra2 certified, but you still want to switch boudary gain compensation on, select **YES** here, but the effect might not work properly.

4 Select either ON or OFF for Boundary Gain Compensation setting.



5 Specify the distance of your surround back speakers from each other.



- **0-0.3 m** – Surround speakers within 30 cm apart (best for THX surround sound).
- **> 0.3-1.2 m** – Surround speakers between 30 cm and 1.2 m apart.
- **1.2 m <** – Surround speakers more than 1.2 m apart.

6 When you're finished, press RETURN.
You will return to the Manual SP Setup menu.

Chapter 7:
Other connections

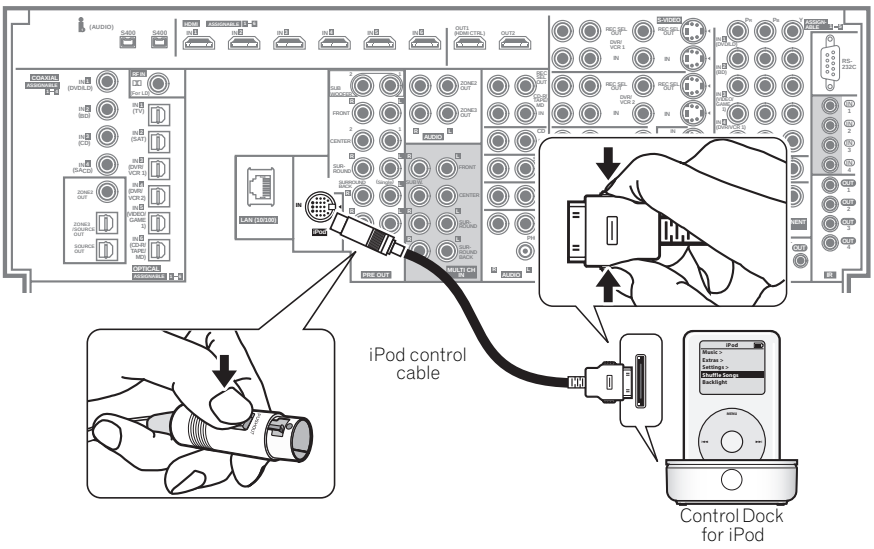
Caution

- Make sure the power is switched off before making or changing the connections.

Connecting an iPod

This amplifier has a dedicated iPod terminal that will allow you to control playback of audio content from your iPod using the controls of this amplifier.[1] If **Error I3** is displayed when this amplifier is connected to an iPod and the input is set to the iPod, this amplifier's iPod operation mode must be switched. To do so, follow the procedure at *Switching the iPod operation mode* on page 58 and switch to **Type 2**. The iPod can now be operated from this amplifier.

Connecting your iPod to the amplifier



1 Set this amplifier to the standby mode, and then use the supplied iPod control cable[2] to connect your iPod to the iPod terminal on the rear panel of this amplifier.

Push the connector in until you hear it click home. To disconnect, squeeze the connector (as shown) to release the catch, then pull out.

2 Switch the amplifier on and press the iPod input source button to switch the amplifier to the iPod.

The front LCD display shows **Loading** while the amplifier verifies the connection and retrieves data from the iPod.

Note

1 • This system is compatible with an iPod, iPod mini, iPod nano and iPod Photo portable device (fourth generation and above). However, compatibility may vary depending on the software version of your iPod. Note, however, that some of the functions may be restricted for some models.
• iPod nanos of the second generation and before do not output video signals externally, so iPod nano images cannot be played on this amplifier.
• When an iPod or iPod nano of fifth generation or above is connected, the audio signals are transferred from the iPod in digital format (LPCM), allowing playback with higher sound quality.
• Video contents can be played on this amplifier by connecting an iPod compatible with the Video Browse function.

2 • This cable is for use with this unit only. Do not use it with other equipment.
• This product is the Pioneer Control Dock for iPod (IDK-80) for use with an iPod equipped with a dock connector port (fourth generation and above), iPod mini, iPod nano or iPod Photo.
• For detailed instructions on using the iPod, please refer to the manual supplied with the iPod.

3 Set the operation selector switch to SOURCE, and then press TOP MENU button to display iPod Top menu.

When the display shows Top Menu you're ready to play music from the iPod.[1]

- If the display shows **No Connection** after pressing **iPod**, try switching off the amplifier and reconnecting the iPod to the amplifier.
- If the display shows **Error I3** after pressing **iPod**, set the iPod operation mode to **Type 2**. See *Switching the iPod operation mode* on page 58.

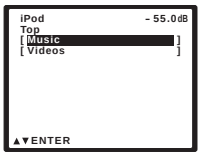
iPod playback

To navigate songs or videos on your iPod, you can take advantage of the OSD of your TV connected to this amplifier.[2] You can also control all operations for music or videos in the front LCD display of this amplifier.

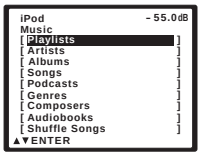
Finding what you want to play

When your iPod is connected to this amplifier, you can browse songs or videos stored on your iPod by playlist, artist, album name, song name, video name, genre or composer, similar to using your iPod directly.

- Example of top menu for iPods compatible with the Video Browse function



- Example of top menu for iPods not compatible with the Video Browse function



1 (When Video Browse compatible) Use the ⬆/⬇ buttons to select and set either Music or Videos, then press ENTER.

2 Use the ⬆/⬇ buttons to select a category, then press ENTER to browse that category.

- To return to the previous level, press **RETURN**.

3 Use the ⬆/⬇ buttons to browse the selected category (e.g., albums).

- Use ⬅/➡ to move to previous/next levels.

4 Continue browsing until you arrive at what you want to play, then press ► to start playback.[3]

Navigation through audio categories on your iPod looks like this:

Playlists → Songs
Artists → Albums → Songs
Albums → Songs
Songs
Podcasts
Genres → Artists → Albums → Songs
Composers → Albums → Songs
Audiobooks
Shuffle Songs

Tip

- You can play all of the songs or videos in a particular category by selecting the **All** item at the top of each category list. For example, you can play all the songs by a particular artist.

Basic playback controls

The following table shows the basic playback controls for your iPod:

Button	What it does
►	Press to start playback. If you start playback when something other than a song is selected, all the songs that fall into that category will play.
⏸	Pauses playback, or restarts playback when paused.
◄◄/►►	Press and hold during playback to start scanning.
⏮/⏭	Press to skip to previous/next song.
🔁	Press repeatedly to switch among **Repeat One**, **Repeat All** and **Repeat Off**.
🔀	Press repeatedly to switch among **Shuffle Songs**, **Shuffle Albums** and **Shuffle Off**.
⬅/➡	When browsing, press to move to previous/next levels.
⬆/⬇	During Audiobook playback, press to switch the playback speed: Faster ⟷ Normal ⟷ Slower
TOP MENU	Press to return to the **iPod Top** menu screen.
iPod CTRL	Press to switch to the iPod controls. Press again to return to the amplifier controls.
RETURN	Press to return to the previous level.

Note

1 The controls of your iPod will be inoperable when connected to this amplifier (Pioneer shows in the iPod display). Features such as the equalizer cannot be controlled using this amplifier, and we recommend switching the equalizer off before connecting.
2 Note that with **ZONE 2** or **ZONE 3** non-roman characters in the playlist are displayed as **#**.
3 If you're in the song category or video category, you can also press **ENTER** to start playback.

Watching photos and video content

To view photos or video on your iPod, since video control is not possible using this amplifier, you must use the main controls of your iPod instead.[1]

1 Set the operation selector switch to SOURCE, then press iPod CTRL to switch to the iPod controls for photo and video playback.

The amplifier controls will be unavailable while you are watching iPod videos or browsing photos.

2 Press iPod CTRL again to switch back to the amplifier controls when you're done.

Switching the iPod operation mode

On this amplifier, there are two iPod operation modes. Normally **Type 1**, the factory default, can be used, but with some models of iPods the iPod cannot be controlled from this amplifier unless you switch to **Type 2**. If **Error 13** is displayed when you connect the iPod, use the procedure described below to switch to **Type 2**.[2]

1 When this amplifier is in the standby mode, press the ⏻ STANDBY/ON button while pressing the SETUP button.

2 Select 'iPod mode ◄ Type 1 ►' on the LCD.

3 Select 'Type 1' or 'Type 2' (⬅/➡ then ENTER).

iPod is a trademark of Apple Inc., registered in the U.S. and other countries.

Using the i.LINK interface

If you have a component with an i.LINK connector, you can connect it to this amplifier using an i.LINK cable.

Since the i.LINK interface does not transmit video signals, the video signal of i.LINK-connected components must be connected with other cables (see *Connecting your equipment* on page 16 for more on making video connections). If you've already hooked up the video signal from the component, assign the i.LINK input to the input function to which you've connected the video signals (see *The Input Setup menu* on page 94). See *Checking the i.LINK inputs* on page 59 to confirm your i.LINK settings.

The two i.LINK connectors on the rear of your amplifier are 4-pin connectors. Use a 4-pin, S400 i.LINK cable to connect i.LINK-equipped components.

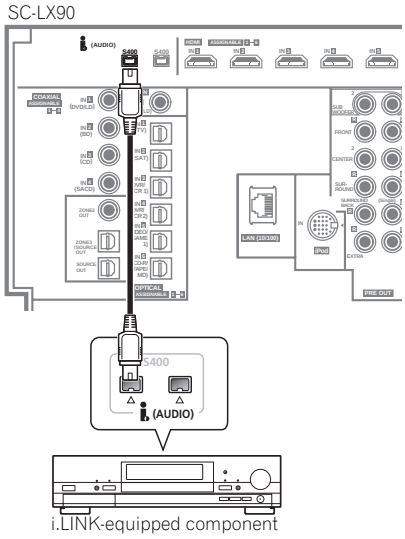
Caution

- If your i.LINK connector comes into contact with metallic parts of the amplifier other than the i.LINK terminal, an electrical short may occur. Some cables have metal parts that may touch the unit when connected. Please take care to use a suitable i.LINK cable only.

Important

- Please use 4-pin, S400 cables less than 3.5 meters long. Although longer ones are available, they may not work reliably.
- There may be cases where the PQLS/rate control function and/or the i.LINK audio does not work properly even when connected to i.LINK Audio-compatible equipment.
- Do not connect/disconnect i.LINK cables or switch on/off any components connected using i.LINK when the amplifier is on.

1 Use an i.LINK cable to connect one of the i.LINK connectors on this amplifier to an i.LINK connector on your i.LINK component.

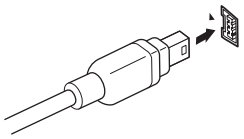


i.LINK-equipped component

Note

1 Your iPod nano currently restricts viewing of photo images stored.
2 The Video Browse function cannot be used when **Type 2** is set.

- The arrow on the cable connector body should be lined up with the arrow (to the left of the connector) on the amplifier for correct alignment. The i.LINK cable should be inserted straight into the connector so that it snaps easily into place. If not connected properly the amplifier will not be able to recognize any connected components. Note that the i.LINK cable is fragile and can be broken easily if too much force is used when connecting.



2 Assign the i.LINK component to the input you want, then make any necessary output settings on the component.

See *The Input Setup menu* on page 94 to assign the component to an input function on this amplifier. Follow the operating instructions that came with the component to make any necessary output settings.

- You can connect several components together using i.LINK. See *Creating an i.LINK network* below.

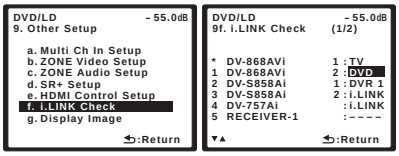
Checking the i.LINK inputs

If you have several i.LINK-equipped components and have assigned them to input functions in *The Input Setup menu* on page 94, you can confirm the settings you made below.

1 Select 'i.LINK Check' from the Other Setup menu and press ENTER.

See *The Other Setup menu* on page 96 for more on navigating this menu screen.

- If no i.LINK-equipped components are connected **i.LINK Check** cannot be selected.



2 Scroll through the list to confirm your settings.

When a number of i.LINK-equipped components are connected to your amplifier, the i.LINK-equipped component you are looking for might be listed on additional display screens.

- **i.LINK** is displayed after unassigned device names (e.g. **DV-79AVi [i.LINK]**).
- If a connected devices cannot output (playback) a source using the i.LINK connection, **[- - - -]** is displayed after the input device name (e.g. **DV-79AVi [- - - -]**). Non-compatible devices cannot be assigned to inputs.
- When the cables for an assigned input device become loose or the power is cut to the device, an asterisk (*****) appears before the device name (e.g. ***DV-79AVi [CD]**).

3 When you're finished, press RETURN.

You will return to the Other Setup menu.

About i.LINK

i.LINK is a trademark name for IEEE1394, a high-speed interface for digital audio, video and other data found on personal computers, digital camcorders, and other kinds of audio and audio/visual equipment. A single i.LINK connector can both send and receive data at the same time, so only one cable is required to connect components for two-way communication.

"i.LINK" and the "i.LINK" logo are trademarks of Sony Corporation.

About PQLS rate control

Pioneer's PQLS (Precision Quartz Lock System) technology provides high-precision digital audio from DVD-A, SACD and audio CD sources when you use the i.LINK interface. A precision quartz controller in this amplifier eliminates distortion caused by timing errors (jitter), giving you the best possible digital-to-analog conversion from the digital source.

To take advantage of PQLS, you must have a player compatible with rate-control, and it must be switched on and connected to this amplifier through the i.LINK network.

Creating an i.LINK network

Using i.LINK it is possible to chain up to 17 components together so that the digital audio and control signals from each component is available to other components in the network. With the addition of an i.LINK repeater, it's possible to connect up to 63 components.

i.LINK connectors come in 4-pin and 6-pin configurations. This amplifier uses the 4-pin connection, but the two types can be mixed on a network.

This amplifier is compatible with i.LINK Audio (A&M protocol) components, such as DVD players. Note that when connected to i.LINK MPEG-II TS equipment (such as a digital satellite tuner), i.LINK DV equipment (such as a DVD recorder or DV camcorder), or an i.LINK-equipped personal computer, audio and video signals are not transmitted, and connecting to these devices sometimes causes network interruptions. Check the operating instructions supplied with your other i.LINK components for compatibility information.

This amplifier is DTCP (Digital Transmission Content Protection) compliant, so you can play DVD-A, DVD-Video, and SACD i.LINK audio.

When setting up an i.LINK network, it's important that the components form an open ended chain (*fig. 1*), or a tree (*fig. 2*).

fig. 1

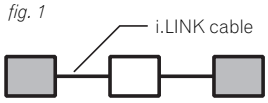
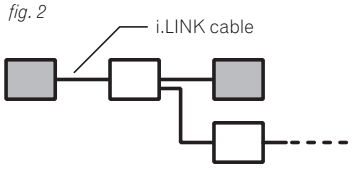


fig. 2



The system will not work if the connected components form a loop. If a loop is detected, the message **LOOP CONNECT** shows in the display. Figs. *3* and *4* show connections that form a loop.

fig. 3

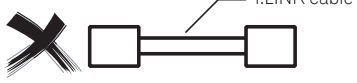
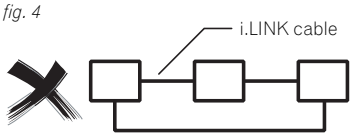


fig. 4



Another consideration when connecting i.LINK devices is the speed of the interface. At present there are three speeds; S100 (slowest), S200 and S400 (fastest). This amplifier uses the S400 type. Although you can use components with different speeds together, we recommend connecting slower-speed components at the edge of the network if possible (shown by the shaded boxes in figs. 1 and 2). This will keep the network free of bottlenecks.

When used within an i.LINK network, this amplifier must be on for the i.LINK connection to be maintained. Other components in the network may or may not maintain the connection in standby (none will when the power is completely off)—check the operating instructions supplied with individual components. Note that the audio may be momentarily interrupted if a component in the i.LINK network is switched on/off, or its i.LINK connection is switched on/off.

This product complies with the following i.LINK interface specifications:

1) IEEE Std. 1394a-2000, Standard for a High Performance Serial Bus

2) Audio and Music Data Transmission Protocol 2.0 Following the standard for AM824 sequence adaptation layers, the product is compatible with IEC60958 bitstream, DVD-A and SACD.

Connecting the multichannel analog inputs

For DVD Audio and SACD playback, your DVD player may have 5.1, 6.1 or 7.1 channel analog outputs (depending on whether your player supports surround back channels).[1] Make sure that the player is set to output multichannel analog audio.

1 Connect the front, surround, center and subwoofer outputs on your DVD player to the corresponding MULTI CH IN jack on this amplifier.

- Use standard RCA/phono jack cables for the connections.

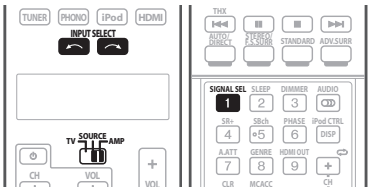
2 If your DVD player also has outputs for surround back channels, connect these to the corresponding MULTI CH IN jacks on this amplifier.

- Use standard RCA/phono jack cables for the connections.
- If there is a single surround back output, connect it to the **SURROUND BACK L (Single)** jack on this amplifier.

Selecting the multichannel analog inputs

If you have connected a decoder or a DVD player as above, you must select the analog multichannel inputs for surround sound playback.[2]

With MULTI CH IN inputs, it is possible to switch the number of channels of the input signal according to the connected components. For example, when only two channels of audio signals are being input to the MULTI CH IN terminals, switch the number of playback channels to **2 ch** using the **SIGNAL SEL** button.



Note

1 To listen to multichannel analog audio you'll need to switch the input signal selector to **MULTI CH IN** (see *Selecting the multichannel analog inputs* above for more on this).

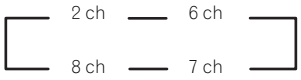
2 • When playback from the multichannel inputs is selected, only the volume and channel levels can be set.
• You can't listen to your speaker B system during playback from the multichannel inputs.
• With **MULTI CH IN** inputs, it is possible to play pictures simultaneously. For details, see *Multi Channel Input Setup* on page 96.

1 Make sure you have set the playback source to the proper output setting.
For example, you might need to set your DVD player to output multichannel analog audio.

2 Use the INPUT SELECT button to select MULTI CH IN.
You can also use the **INPUT SELECTOR** dial on the front panel.

3 Set the operation selector switch to AMP.

4 Press the SIGNAL SEL button repeatedly to select the number of channels of the input signal you want to play.
The mode switches as shown below each time the button is pressed.



- Depending on the DVD player you're using, the analog output level of the subwoofer channel may be too low. In this case, the output level of the subwoofer can be increased by 10 dB in the Multi Ch In Setup in Other Setup. For details, see *Multi Channel Input Setup* on page 96.

Switching the speaker system

When the A/B speaker system is switched, the speakers being played switches. Select the speaker system to be used as necessary.

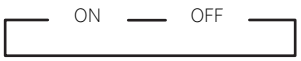
- **Use the SPEAKERS button on the front panel to select a speaker system setting.**

The modes that can be selected differ according to the speaker output setting (see page 43).

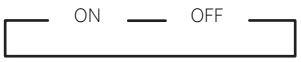
The mode switches as shown below each time the button is pressed.

When set to Normal

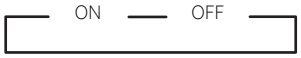
When set to All CH Bi-Amp



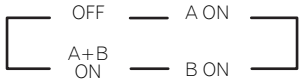
When set to Front Bi-Amp

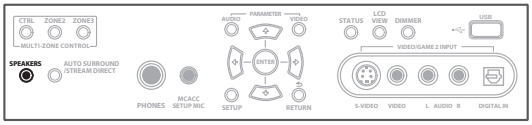


When set to 7.2ch + ZONE 2



When set to 7.2ch + Speaker B





When set to Normal

- **SP: A+B ON**: The surround sound is output from the speakers connected to both A and B.
- **SP: A ON**: The surround sound is only output from the speaker connected to A. It is not output from the speaker connected to B.
- **SP: B ON**: The surround sound is only output from the speaker connected to B. It is not output from the speaker connected to A.

When set to 7.2ch + Speaker B[1]

- **SP: A ON**: The sound is output from all the speakers other than those connected to the L2 and R2 speaker terminals (surround playback is possible).
- **SP: B ON**: Only output from speakers connected to the L2 and R2 speaker terminals. (Only 2-channel stereo playback possible.)
- **SP: A+B ON**: The sound of A and B above is output simultaneously.

When set to All CH Bi-Amp or Front Bi-Amp

- **SP: ON**: Output from all speakers.

When set to 7.2ch + ZONE 2

- **SP: ON**: The sound selected for the main zone is output from the speakers connected to speaker terminals other than L5 and R5. The sound selected for ZONE 2 is output from the speakers connected to the L5 and R5 speaker terminals.

Common to all the above settings

- **SP: OFF**: No sound is output from the speakers. Sound is only output from Zone 2 when the speaker output terminal setting (see page 43) is set to **7.2ch + ZONE 2**. (Sound is always output from the pre-out terminals, so sound may be output from the subwoofer.)

Note

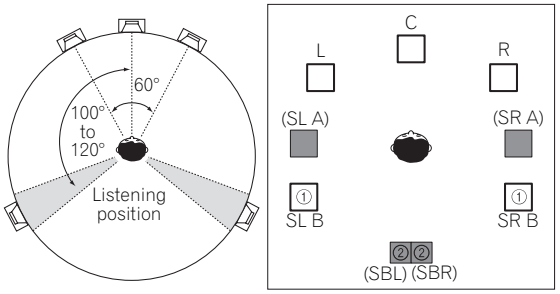
1 When **A ON** is selected, the sound of B is not output from the PREOUT terminal. In the same way, when **B ON** is selected, the sound of A is not output from the PREOUT terminal. The sound of both A and B is output from the PREOUT terminal when either **A+B ON** or **OFF** is selected.

Switching the speaker system according to the playback environment (Application Manual)

With the amplifier, the combination of the speaker system A/B selection with the surround back channel processing selection (page 37) can be used to switch between the speaker configuration for high sound quality multi-channel music sources (DVD Audio discs, SACDs, etc.) recommended by the ITU-R and a speaker system for viewing movies as recommended by THX.

Note that to do so you must make 9.1-channel (or 9.2-channel) speaker connections and set the speaker output terminal setting to **Normal**.

Setting the speaker system for high sound quality multi-channel music sources (DVD Audio discs and SACDs)



1 Switch the speaker system.

Select **B ON**. A is turned off and sound is only produced from the surround B channel (speaker for listening to music).

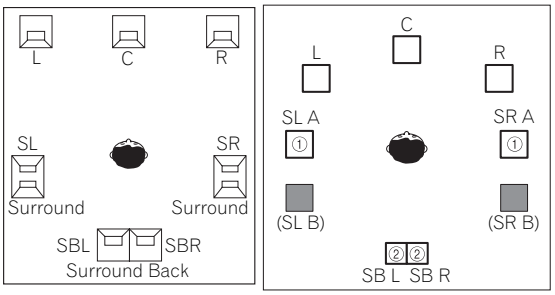
2 Switch the surround back channel.

Select **SBch OFF**. The above settings allow you to enjoy high sound quality multi-channel music sources with the speaker layout recommended by the ITU-R (5.1 or 5.2 channels).

About ITU-R BS.775-1

This configuration is recommended by the ITU-R (International Telecommunication Union – Radiocommunication Sector). It is the basic configuration used in DVD Audio and SACD mixing studios, though in some cases the sound is recorded with the assumption that the surround speakers are at the 135° position.

Setting the speaker system for movie sources



Speaker configuration recommended by THX

Set the speakers with the surround back speakers adjacent to each other and equidistant from the listening position.

1 Switch the speaker system.

Select **A ON**. B is turned off and sound is only produced from the surround A channel (dipole speaker).

2 Switch the surround back channel.

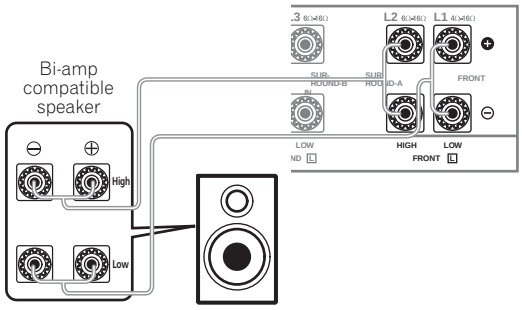
Select **SBch ON**. The above settings allow you to enjoy movies with the speaker layout recommended by THX (7.1 or 7.2 channels).

Bi-amping your speakers

Bi-amping is when you connect the high frequency driver and low frequency driver of your speakers to different amplifiers for better crossover performance. Your speakers must be bi-ampable to do this (having separate terminals for high and low) and the sound improvement will depend on the kind of speakers you're using.

- **Connect your speakers as shown below.**

This illustration below shows the connections for bi-amping your front left speaker. Hook up your bi-amp compatible speakers for other channels in the same way.



- Make sure that the **+** / **–** connections are properly inserted.

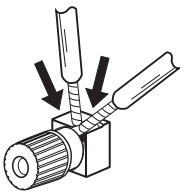
Caution

- Most speakers with both **High** and **Low** terminals have two metal plates that connect the **High** to the **Low** terminals. These must be removed when you are bi-amping the speakers or you could severely damage the amplifier. See your speaker manual for more information.
- If your speakers have a removable crossover network, make sure you do not remove it for bi-amping. Doing so may damage your speakers.

Bi-wiring your speakers

The reasons for bi-wiring are basically the same as bi-amping, but additionally, interference effects within the wire could be reduced, producing better sound. Again, to do this your speakers must be bi-wireable (that is they must have separate terminals for the high and low frequencies).

- **To bi-wire a speaker, connect two speaker cords to the speaker terminal on the amplifier.**



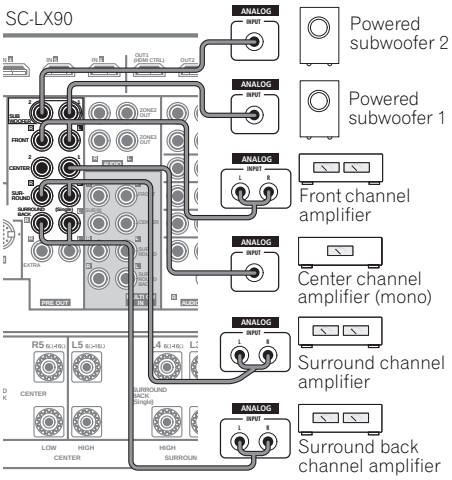
Caution

- Make sure you use a parallel (not series, which are fairly uncommon) connection when bi-wiring your speakers.
- Don't connect different speakers from the same terminal in this way.

Connecting additional amplifiers

This amplifier has more than enough power for any home use, but it's possible to add additional amplifiers to every channel of your system using the pre-outs. Make the connections shown below to add amplifiers to power your speakers.

- Before making or changing the connections, switch off the power and disconnect the power cord from the AC outlet.



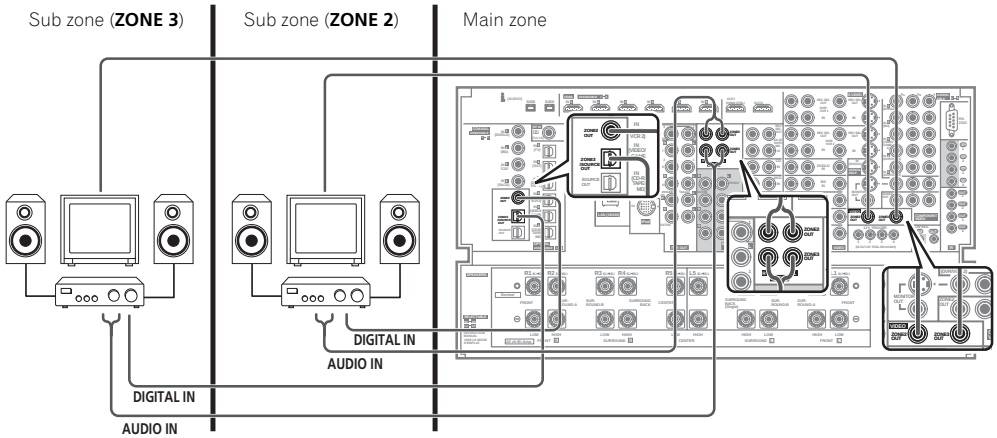
- The sound from the PREOUT SURROUND BACK and PREOUT EXTRA terminals will depend on how you configured the *Speaker output setting* on page 43. Pay attention to this when connecting another power amplifier, etc.

Speaker output setting	Sound output from the PREOUT SURROUND BACK terminals	Sound output from the PREOUT EXTRA terminals
Normal	Surround back channel sound	Surround B channel sound
All CH Bi-Amp	None	None
Front Bi-Amp	Surround back channel sound	None
7.2ch + ZONE 2	Surround back channel sound	None
7.2ch + Speaker B	Surround back channel sound	Down-mixed 2-channel sound

- You can use the additional amplifier on the surround back channel pre-outs for a single speaker as well. In this case plug the amplifier into the left (**L (Single)**) terminal only.
- To hear sound only from the pre-outs, switch the speaker system to **OFF**, or simply disconnect any speakers that are connected directly to the amplifier.
- If you're not using a subwoofer, change the front speaker setting (see *Speaker Setting* on page 52) to large.

MULTI-ZONE listening

This amplifier can power up to three independent systems in separate rooms after you have made the proper MULTI-ZONE connections. An example MULTI-ZONE setup is shown below, but the number of MULTI-ZONE connections (and the way you choose to connect them) depends on how you want to set up your system.



Different sources can be playing in three zones at the same time or, depending on your needs, the same source can also be used.[1] The main and sub zones have independent power (the main zone power can be off while one (or both) of the sub zones is on) and the sub zones can be controlled by the remote or front panel controls. However, you may need to specify the volume settings in *ZONE Audio Setup* on page 97.

Making MULTI-ZONE connections

It is possible to make these connections if you have a separate TV and speakers for your primary (**ZONE 2**) sub zone, and a separate amplifier[2] (and speakers) for your secondary (**ZONE 3**) sub zone. You will also need a separate amplifier if you selected an option other than **7.2ch+ZONE 2** in the speaker output in *Speaker output setting* on page 43 for your primary sub zone. There are two primary sub zone setups possible with this system. Choose whichever works best for you.

MULTI-ZONE listening options

The following table shows the signals that can be output to ZONE 2 and ZONE 3:

Sub Zone	Input sources available
ZONE2	Analog audio signals (AUDIO ZONE2 OUT)[a] and digital audio signal (COAXIAL ZONE2 OUT). With video signals, the composite video (VIDEO ZONE2 OUT) and component video (COMPONENT VIDEO ZONE2 OUT) signals can be output but the S-Video signal cannot be output.
ZONE3	Analog audio signals (AUDIO ZONE3 OUT)[a] and digital audio signal (OPTICAL ZONE3/ SOURCE OUT). With video signals the composite video (VIDEO ZONE3 OUT) signal can be output but the component video and S-Video signals cannot be output.

a. Any analog signal including the iPod signal. (With the **MULTI CH IN** input, sound is output only from the front L/R channels.)

Note

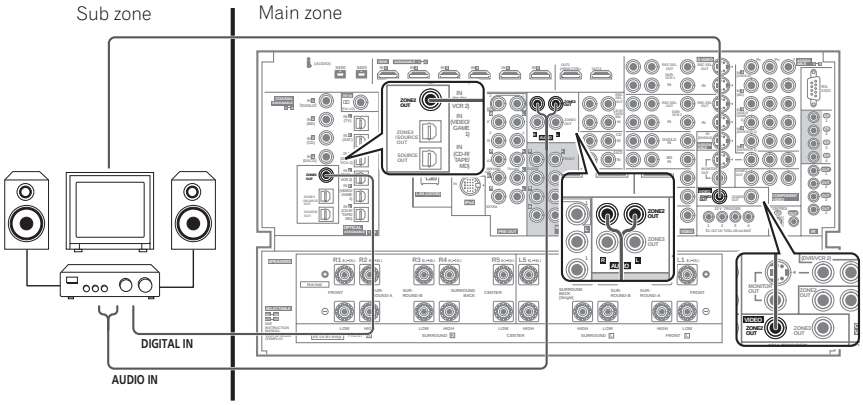
1 Selecting the HOME MEDIA GALLERY input for Zone 2 or Zone 3 may decrease the quality of the HOME MEDIA GALLERY picture in the main zone.

2 You can't use sound controls (such as the tone controls or Midnight listening) or any surround modes with a separate amplifier in the sub zone. You can, however, use the features available with your sub zone amplifier.

Basic MULTI-ZONE setup (ZONE 2)

1 Connect a separate amplifier to the AUDIO ZONE2 OUT jacks and a TV monitor to the VIDEO ZONE2 OUT jacks, both on the rear of this amplifier.
You should have a pair of speakers attached to the sub zone amplifier as shown in the following illustration.

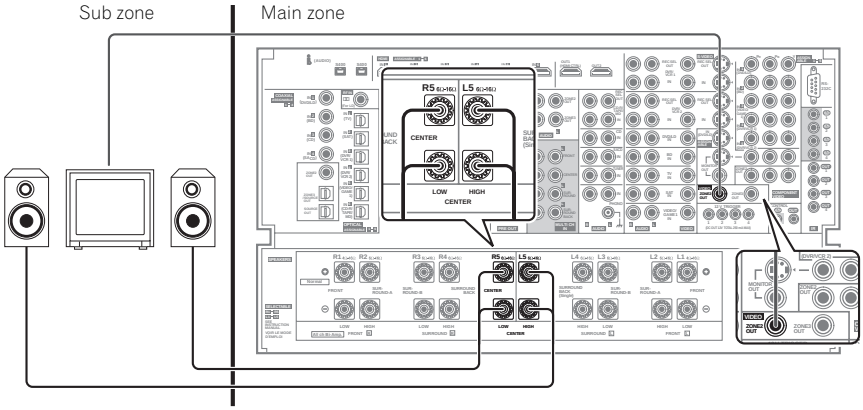
2 Connect a separate amplifier to the COAXIAL ZONE2 OUT digital output on the rear of this amplifier.
The amplifier must have an optical digital input to make this connection. This will allow you to hear the digital output of a component in a second sub zone.



MULTI-ZONE setup using speaker terminals (ZONE 2)

You must select **7.2ch+ZONE 2** in *Speaker output setting* on page 43 to use this setup. Note that the sound in the sub zone will be temporarily interrupted when controlling the main zone (for example, changing the input source or starting playback).

- **Connect a TV monitor to the VIDEO ZONE2 OUT jacks on the rear of this amplifier.**
You should have a pair of speakers attached to the R5 and L5 terminals as shown below.

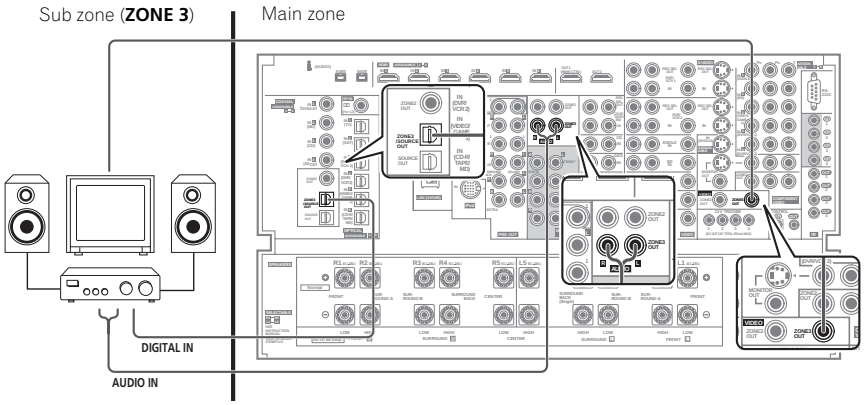


Secondary MULTI-ZONE setup (ZONE 3)

1 Connect a separate amplifier to the AUDIO ZONE3 OUT jacks and a TV monitor to the VIDEO ZONE3 OUT jacks, both on the rear of this amplifier.

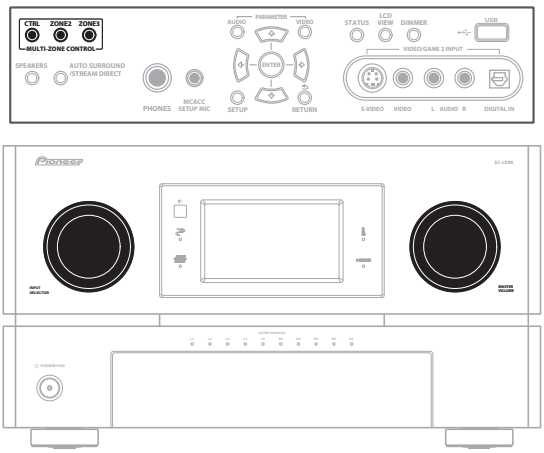
2 Connect a separate amplifier to the ZONE3/ SOURCE OUT digital output on the rear of this amplifier.

The amplifier must have an optical digital input to make this connection. This will allow you to hear the digital output of a component in a second sub zone.



Using the MULTI-ZONE controls

The following steps use the front panel controls to adjust the sub zone volume and select sources.[1] See *MULTI-ZONE remote controls* on page 67.



1 Press ZONE2 or ZONE3 to select the desired zone (room).

The zone turns on and off each time the corresponding button is pressed. It is possible to turn both on.

2 Press CTRL to select the sub zone(s) you want.[2]

If you selected **ZONE 2 ON** and **ZONE 3 ON** above, you can toggle among **ZONE 2**, **ZONE 3** and **ZONE 2&3**.

- When the amplifier is on,[3] make sure that any operations for the sub zone are done while **ZONE** and your selected sub zone(s) show in the display. If this is not showing, the front panel controls affect the main zone only.

3 Use the INPUT SELECTOR dial to select the source for the zone you have selected.

For example, **ZONE 2 CD-R** sends the source connected to the **CD-R** inputs to the primary (**ZONE 2**) sub room.

4 Use the MASTER VOLUME dial to adjust the volume.

This is only possible if you selected the **VARIABLE** volume control in *ZONE Audio Setup* on page 97.[4]

5 When you're finished, press CTRL again to return to the main zone controls.

You can also press the **ZONE 2** or **ZONE 3** button on the front panel to switch off all output to the sub zone(s).[5]

Note

1 When you use **ZONE 3**, you must set **ZONE 3 / RECSEL Setting** in the ZONE Audio Setup menu to **ZONE 3** (page 97).
2 Note that when recording, this also selects the **RECOUT** input source. See *Making an audio or a video recording* on page 102 for more on this.
3 If the amplifier is in standby, the display is dimmed, and **ZONE** and your selected sub zone(s) continue to show in the display.
4 The volume levels of the main and sub zones are independent.
5 • You won't be able to switch the main zone off completely unless you've switched off the MULTI-ZONE control first.
• If you don't plan to use the MULTI-ZONE feature for awhile, turn off the power in both the sub and main rooms so that this amplifier is in standby.

MULTI-ZONE remote controls

Set the MULTI-ZONE operation switch to **ZONE 2** or **ZONE 3** to operate the corresponding zone.

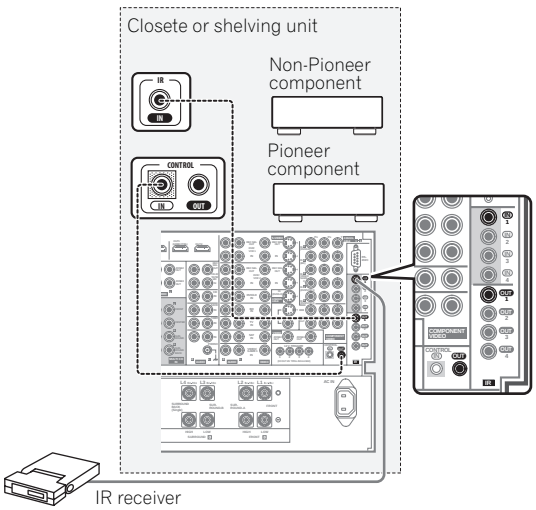
The following table shows the possible MULTI-ZONE remote controls:

Button	What it does
⏻	Switches on/off power in the currently selected sub zone.
INPUT SELECT	Use to select the input source in the currently selected sub zone.
Input source buttons	Use to select the input source directly (this may not work for some functions) in the currently selected sub zone.
VOL +/–	Use to set the listening volume in the currently selected sub zone.

Connecting an IR receiver

If you keep your stereo components in a closed cabinet or shelving unit, or you wish to use the sub zone remote control in another zone, you can use an optional IR receiver (such as a Niles or Xantech unit) to control your system instead of the remote sensor on the front panel of this amplifier.[1]

1 Connect the IR receiver sensor to the IR IN jack on the rear of this amplifier.



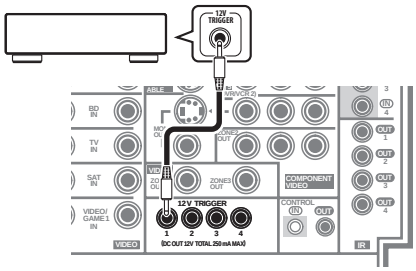
2 Connect the IR IN jack of another component to the IR OUT jack on the rear of this amplifier to link it to the IR receiver.

Please see the manual supplied with your IR receiver for the type of cable necessary for the connection.

- If you want to link a Pioneer component to the IR receiver, see *Operating other Pioneer components with this unit's sensor* on page 111 to connect to the **CONTROL** jacks instead of the **IR OUT** jack.

Switching components on and off using the 12 volt trigger

You can connect components in your system (such as a screen or projector) to this amplifier so that they switch on or off using 12 volt triggers when you select an input function. However, you must specify which input functions switch on the trigger using the *The Input Setup menu* on page 94. Note that this will only work with components that have a standby mode.[2]



- **Connect the 12 V TRIGGER jack of this amplifier to the 12 V trigger of another component.**

Use a cable with a mono mini-plug on each end for the connection.

- The trigger maximum power is DC OUT 12 V/50 mA.

After you've specified the input functions that will switch on the trigger, you'll be able to switch the component on or off just by pressing the input function(s) you've set on page 94.

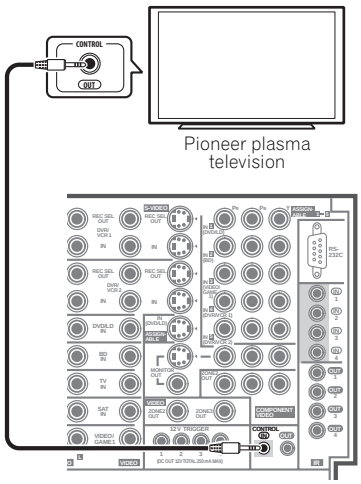
Note

1 • Remote operation may not be possible if direct light from a strong fluorescent lamp is shining on the IR receiver remote sensor window.
• Note that other manufacturers may not use the IR terminology. Refer to the manual that came with your component to check for IR compatibility.
• If using two remote controls (at the same time), the IR receiver's remote sensor takes priority over the remote sensor on the front panel.
• Connections using up to four devices and IR receivers can be made with this amplifier.

2 Triggered connections with up to 4 devices compatible with 12-volt triggers can be made with this amplifier.

Using this amplifier with a Pioneer plasma television

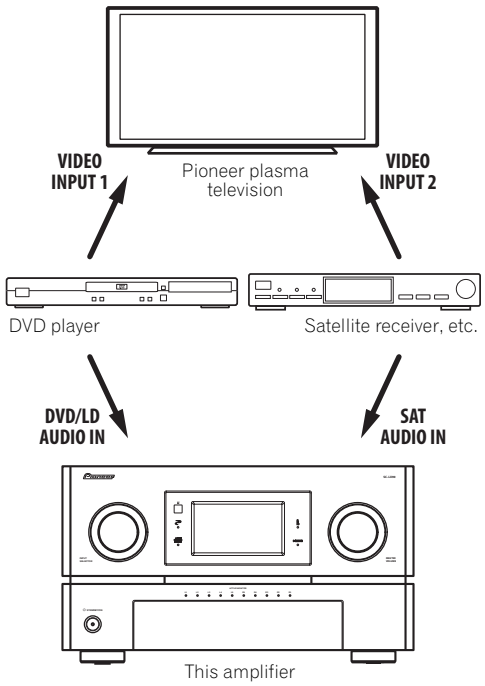
If you have a Pioneer plasma television, you can use an SR+ cable[1] to connect it to this unit and take advantage of various convenient features, such as automatic video input switching of the plasma television when the input is changed.[2]



Important

- You can't use the SR+ features when HDMI Control is set to ON. Make sure to set HDMI Control to OFF when you use the SR+ features (page 92).
- If you connect to a Pioneer plasma television using an SR+ cable, you will need to point the remote control at the plasma television remote sensor to control the amplifier. In this case, you won't be able to control the amplifier using the remote control if you switch the plasma television off.
- Before you can use the extra SR+ features, you need to make a few settings in the amplifier. See *The Input Setup menu* on page 94 and *SR+ Setup for Pioneer plasma televisions* on page 97 for detailed instructions.

- **Use a 3-ringed miniplug SR+ cable to connect the CONTROL IN jack of this amplifier with the CONTROL OUT jack of your plasma television.**



To make the most of the SR+ features, you should connect your source components (DVD player, etc.) in a slightly different way to that described in this chapter. For each component, connect the video output directly to the plasma television, and just connect the audio (analog and/or digital) to this amplifier.

Note

1 The 3-ringed SR+ cable from Pioneer is commercially available under the part number ADE7095. Contact the Pioneer Customer Support division for more information on obtaining an SR+ cable (you can also use a commercially available 3-ringed mini phone plug for the connection).
2 This amplifier is compatible with all SR+ equipped Pioneer plasma televisions from 2003 onward.

Using the SR+ mode with a Pioneer plasma television

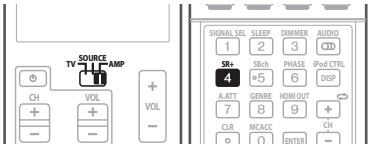
When connected using an SR+ cable, a number of features become available to make using this amplifier with your Pioneer plasma television even easier. These features include:

- On-screen displays when making amplifier settings, such as speaker setup, MCACC setup, and so on.
- On-screen volume display.
- On-screen display of listening mode.
- Automatic video input switching on the plasma television.
- Automatic volume muting on the plasma television.

See also *SR+ Setup for Pioneer plasma televisions* on page 97 for more on setting up the amplifier.

Important

- The SR+ features do not work when any of the iPod or HOME MEDIA GALLERY function is selected.



1 Make sure that the plasma television and this amplifier are switched on and that they are connected with the SR+ cable.

See *Using this amplifier with a Pioneer plasma television* on page 68 for more on connecting these components.

- Make sure you have also selected the display input to which you've connected the amplifier in *The Input Setup menu* on page 94.

2 To switch SR+ mode on/off, set the operation selector switch to AMP, then press the SR+ button.

The front LCD display shows **SR+ ON** or **SR+ OFF**.

- The automatic video input switching and the automatic volume muting features are enabled separately; see *SR+ Setup for Pioneer plasma televisions* on page 97.

Connecting a PC for Advanced MCACC output

When using the Acoustic Calibration EQ Professional (see page 47) to calibrate the reverb characteristics of your listening room, you can graphically check the results on your computer connected to this amplifier. Also, when the Full Band Phase Control function is activated, you can visually check the calibrated characteristics of group delay of the speakers and the corrected characteristics of group delay processed by the exclusive correction filter by installing the corresponding PC application on your computer.

Use a commercially-available RS-232C cable to connect the RS-232C jack on your computer to the 9-pin RS-232C jack on the back panel of this amplifier (the cable must be cross type, female–female).

The software to output the results is available from the support area of the Pioneer website (http://www.pioneer.eu). Instructions for using the software are also available here. If you have any questions about the sofrware, please contact the Pioneer Service Center specified on your warranty card.

Please make sure your system meets the following requirements:

- Operating system must be Microsoft Windows® XP (Service Pack 2) or Windows® 2000.
- CPU must be at least Pentium 3 / 300 MHz or AMD K6 / 300 MHz (or equivalent) with at least 128 MB of memory, and your monitor must be able to display a minimum resolution of 800x600.
- An RS-232C port connector is necessary for graphical output. Refer to the operating instructions and/or the PC manufacturer for more information on making the proper port settings.
- System must have internet access.

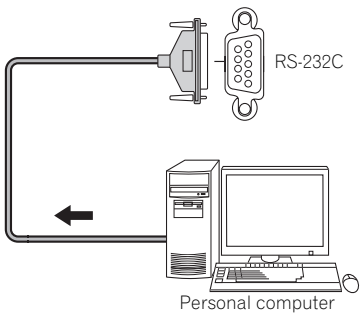
- **Connect your computer to the RS-232C jack on the rear panel of the amplifier.**

Make sure that the amplifier and all connected components are switched off and disconnected from the power outlet when you do this.[1]

Note

1 Make sure that you do this before continuing to the **Reverb Measurement** option in *Using Acoustic Calibration EQ Professional* on page 48 (measurement data is cleared if you switch off the power).

Use a commercially-available cable to connect the RS-232C jack on your computer to the 9-pin RS-232C jack on this amplifier. See the documentation provided with the Advanced MCACC application for more information.

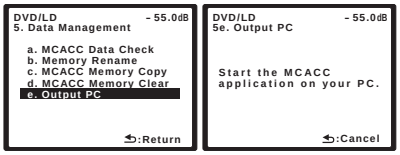


Advanced MCACC output using your PC

Before continuing, make sure you have completed step 1 in *Data Management* on page 50. Note that transmission data is erased when the amplifier is turned off.

1 Select 'Output PC' and press ENTER.

When the amplifier is ready for transmission, **Start the MCACC application on your PC** shows on the OSD.



2 Start the MCACC application on your computer.

Follow the instructions provided with the application. It will take about ten seconds for the transmission to complete, then you will be able to analyze the output on your computer. Since the data will be cleared from the amplifier when you restart reverb measurement or turn off the amplifier, you might want to save the information on your PC after measurement.

3 When you're finished, press RETURN.

You will return to the Data Management menu. Continue with other settings in the Data Management menu if necessary. Press **RETURN** again to exit the Data Management menu.

Chapter 8:
Playback with HOME MEDIA GALLERY inputs

Enjoying the Home Media Gallery

With Home Media Gallery, you can enjoy digital content such as movies, music and photo files. Playable content is files stored on one or more media servers connected by a home network (LAN) or those stored on a USB flash drive. After connecting via a broadband router or an Ethernet hub to a media server with network software*, you can navigate through the digital content on the Home Media Gallery. For USB interface, this amplifier supports Mass Storage Class devices.

* *Referred to as a "media server" that contains digital content such as movies, music and photo files. PCs that have pre-installed media server software and recorders with a media server function are considered the media server. There are some media servers that you can choose from; for example, Windows Media Connect, Windows Media Player that has a media sharing function, and DLNA compliant servers.*

Usable free media servers

Free media servers available from Microsoft include:

1. **Windows Media Connect 2.0**
   Windows Media Connect runs on a 32-bit PC with Windows XP Service Pack 2 (SP2) installed. When it is already installed, you can enjoy Home Media Gallery using your PC.

2. **Windows Media Player 11 for Windows XP**
   Windows Media Player 11 features Media Sharing that runs on a 32-bit PC with Windows XP Service Pack 2 (SP2) installed. If Windows Media Connect 2.0 is not installed in your PC, you can download Windows Media Player 11 from Microsoft's website.

3. **Windows Media Player 11 for Windows Vista**
   Windows Media Player 11 will be featured in 32-bit Windows Vista PCs.

When selecting the most suitable media server, please visit Microsoft's website for system requirements, known issues, installation procedures and other updated information.

PlaysForSure

PlaysForSure is a marketing certification given by Microsoft. The PlaysForSure logo makes it easy to find digital media stores and devices that work together. Digital media purchased from online stores carrying the PlaysForSure logo is available for use on this unit.

This unit complies with PlaysForSure Requirements Specification for Network Devices Version 1.21.

The PlaysForSure logo, Windows Media and the Windows logo are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.

DLNA CERTIFIED™ Audio/Video/Image Player

The Digital Living Network Alliance (DLNA) is a cross-industry organization of consumer electronics, computing industry and mobile device companies. Digital Living provides consumers with easy sharing of digital media through a wired or wireless network in the home.

The DLNA certification logo makes it easy to find products that comply with the DLNA Interoperability Guidelines. This unit complies with the DLNA Home Networked Device Interoperability Guidelines v1.0.

When a PC running DLNA server software or other DLNA-compatible device is connected to this amplifier, some setting changes of software or other devices may be required. Please refer to the operating instructions for the software or device for more information.

DLNA and DLNA CERTIFIED are trademarks and/or service marks of Digital Living Network Alliance.

Supported file formats

The table below shows supported file formats that can be played back or displayed on this amplifier. These formats are applicable to network sources. Most of them are also applicable to USB sources. However, media server content protected by digital rights management, such as WMDRM10 (Windows Media Digital Rights Management 10), may not play on this amplifier. For detailed information about file formats, see *Details of compatible formats* on page 89.

Type of files	Format
Movie	MPEG PS (mpg, mpeg, mpe, m2p), MPEG-2 TS, WMV (asf, wmv), MPEG4 (mp4)
Music	MP3 (mp3), LPCM, WAV (wav), WMA (wma), MPEG-4 AAC (m4a)
Photo	JPEG (jpg, jpeg), BMP (bmp), PNG (png), TIFF (tif, tiff), GIF (gif)

- Some formats may not be supported nor displayed on Home Media Gallery as formats that individual media servers support vary. Refer to the manufacturer's or other relevant website for supported formats on your media server.
- Even with the format included in the above table, some functions may not operate properly depending on the content.
- Even with the format included in the above table, some files may not be played properly through a USB device.

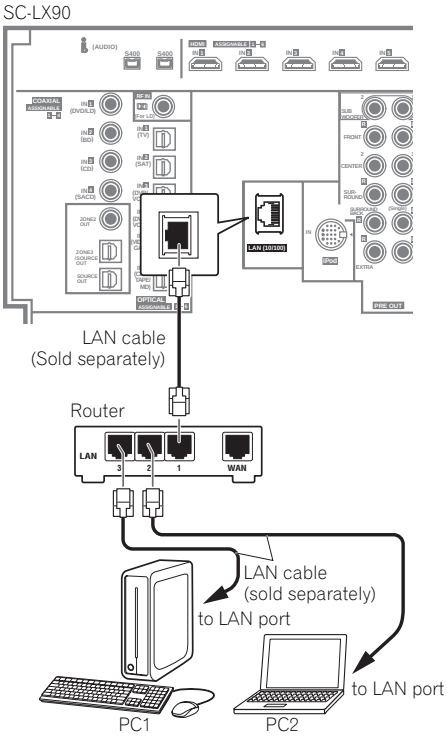
Note

- Content may not play or display properly depending on the conditions of use.
- Sources for this amplifier include media servers running on the LAN network, or SD Card, MS, MMC, xD Picture and CF that comply with the Mass Storage File System through a USB interface.
- Home Media Gallery complies with DLNA version 1.0 and PlaysForSure version 1.21. If your media server supports different DLNA and/or PlaysForSure version(s), some Home Media Gallery function(s) and content format(s) may not be supported.
- Supported formats and contents are subject to change. Visit the Pioneer website for updated information: http://www.pioneer.eu
- The Home Media Gallery functions as a WMDRM10-ND (Microsoft Windows Media DRM for networked devices). Content can only be navigated from the media servers that support WMDRM10-ND.
- The system may not be able to display content from incompatible memory cards.
- You cannot use the Home Media Gallery until dimmed elements on the menu screen turn white.
- Some Home Media Gallery functions, such as trick play during Fast Forward and Rewind, Time Search and Search, may not work depending on the media server's capability and functionality.

Connecting to the network through LAN interface

Caution

- Before making or changing the connections, switch off the power and disconnect the power cord from the power outlet. Plugging in should be the final step.



By connecting this amplifier to the network via the LAN terminal, you can play back files stored on components on the network, including your PC.[1]

Connect the LAN terminal on this amplifier to the LAN terminal on your router (with or without the built-in DHCP server function) with a straight LAN cable (CAT 5 or higher).

Turn on the DHCP server function of your router. In case your router does not have the built-in DHCP server function, it is necessary set up the network manually. For details, see *Network Setup* on page 85.

The specifications of a LAN terminal

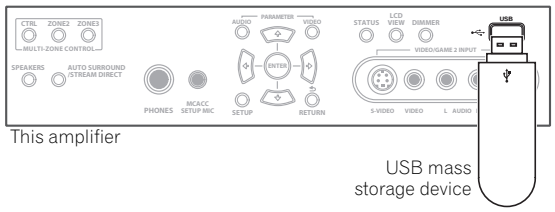
LAN terminal . . . . . Ethernet jack
10BASE-T/100BASE-TX

Note

1 With Windows Media Connect or Windows Media Player 11, you can even play back copyrighted audio files on this amplifier.

Using the USB interface

It is possible to play back files[1] using the USB interface on the front of this amplifier.



This amplifier

USB mass storage device

Confirming the IP Address

After making the network connection, follow the instructions below to confirm the panel's IP Address before accessing the network. (The setup is effective for **Auto** only. To perform the procedure, DHCP on your server or router must be valid.)

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select 'Setup' (↑/↓ then ENTER).

3 Select 'Network Setup' (↑/↓ then ENTER).

4 Select 'Automatically acquire IP' (↑ then ENTER).
The screen turns from Select mode to Input mode.

5 Select 'Yes' (↑/↓ then ENTER).
The IP Address is automatically assigned.

The Home Media Gallery supports Auto IP and DHCP (Dynamic Host Configuration Protocol). If the system failed to acquire the IP Address or if you want to obtain different addresses, select **No** then enter **IP Address** and **Subnet mask**. Use the **0** to **9** and ↑/↓/←/→ buttons to enter an address, then press **ENTER**. You do not need to enter **Default Gateway** and **DNS Server**.

6 Select 'OK' (↓ then ENTER).
The Reset dialog appears on screen.

7 Select 'OK' and press ENTER.
The home network module restarts.

A message **Setting up Home Media Gallery. Please wait until initialized.** appears on screen.

When the initialization is finished, setting values become effective and the top menu of the Home Media Gallery returns.

Note

- For information on DHCP, refer to network device's operating instructions.
- You may need to contact your service provider or network administrator when manually entering an IP Address.
- Some media servers block or are programmed to block access to client servers. When connecting this amplifier, check the media server for client server access rights.

Connecting a USB device

You can also enjoy content stored on memory cards by connecting a USB device to this amplifier. When you insert a USB flash drive or multi-card reader into the USB port, the root directory or the Device List screen appears. In addition, you can connect your digital camera directly to this amplifier using a USB connector cable.

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select 'USB' (↑/↓ then ENTER).
The Device List is displayed on screen with the selected device highlighted if you have not checked in the **Single Server/USB** box after selecting **Setup** and then **Auto Connection Setup**. If you have checked in the box, the list is skipped.

3 Select the desired device (↑/↓ then ENTER).
You can select a device only when the Device List is displayed.

4 Press ENTER to navigate to a folder or play a file/ content.
To return to the previous screen, press **RETURN**.

Note

- If the Home Media Gallery is launched and the **Single Server/USB** box is checked after selecting **Setup** and then **Auto Connection Setup**, the system displays the root directory immediately after inserting a USB device. In this case, you can start from step 4. When a multi-card reader is inserted, the Device List appears with the selected device highlighted. In this case, you can start from step 3.

Note

1 • Compatible USB devices include external magnetic hard drives, portable flash memory (particularly keydrives) and digital audio players (MP3 players) of format FAT16/32. It is not possible to connect this unit to a personal computer for USB playback.
• Pioneer cannot guarantee compatibility (operation and/or bus power) with all USB mass storage devices and assumes no responsibility for any loss of data that may occur when connected to this amplifier.

Readable USB devices

This system reads FAT16, FAT32 and NTFS.

Readable data files

Movie, music and photo files can also be played with the exception of Digital Rights Management (WMDRM10) protected files.

Note

- A single USB device can be connected at a time and no USB hub connected.
- This system may not be able to display modified or edited content from a PC or other equipment.
- This system supports the USB Mass Storage Class.
- Some digital cameras may require a setup procedure for Mass Storage Class data transfer. The setup is done on the camera. See the operating instructions supplied with the digital camera.
- This system may not be able to display images, depending on the type of your memory card, or camera.

Removing a USB device

To remove a USB device, exit the Home Media Gallery first and then disconnect the device.

Note

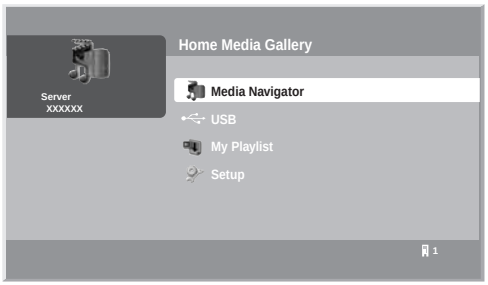
- Be sure to exit the Home Media Gallery screen before removing the USB device. If you remove the USB device while the Home Media Gallery screen is displayed, data inside the memory may be damaged.
- Do not insert or remove the USB device immediately after this amplifier is switched on or off. This action may cause data inside the memory to be damaged.
- Pioneer is not liable for any loss or damage to the data inside the USB flash drive.

Starting the Home Media Gallery function

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select 'Media Navigator', 'USB', 'My Playlist' or 'Setup' (↑/↓ then ENTER).

- To return to the previous screen, press **RETURN**.
- To exit Home Media Gallery, select other input source.



Navigating the files and folders

By selecting Media Navigator, the previously selected server menu is automatically displayed on the screen by default (page 85). When only one server is found, the system automatically connects the server. You can also use the Tool Menu to switch to another server or manually select a server from the Server List. The display is automatically changed to a server list if there are no previously navigated servers.

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select 'Media Navigator' (↑/↓ then ENTER).
A server menu appears. The file/folder configuration may vary depending on the server selected.

After selecting a category, folder or container and navigating on subsequent screens, you can find a file and start the appropriate Player depending on the selected file.

3 Select the desired folder to navigate or file/content to play (←/→ or ↑/↓ then ENTER).

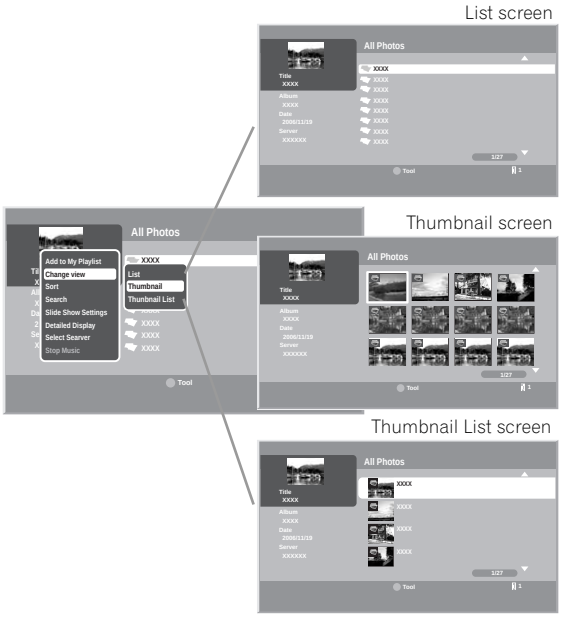
4 Press ENTER to display a subsequent screen.
Subsequent screen appears.

To return to the previous screen, press **RETURN**.

To exit Home Media Gallery, select other input source.

Selectable screen display

Menu display options are: **List**, **Thumbnail** or **Thumbnail List**. Press **ADV SURR** (Yellow) then select **Change view** from the Tool Menu to choose from the screen display options.



Using the Tool Menu

Press **ADV SURR** (Yellow) on the remote control to access the pop-up Tool Menu. Various play and display modes can be selected from the Tool Menu. The selectable menu items differ depending on the submenu (see the table below).

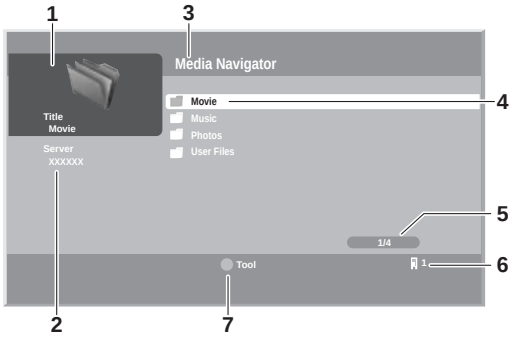
Menu items	Function	Screen on which Tool Menu is available
Update to Latest Information	Updates the server connection status	Server List (connected/not connected)
Delete Server	Deletes the server that are dimmed on the list	Server List (server not connected)
USB Devices List	Moves to the USB Devices List screen	Folder Contents List (USB)/ Contents List (USB)
Consecutive Playback[a]	Continuously plays video content starting from the selected item	Folder Contents List/ Contents List
Detailed Display[a]	Displays the detailed information on the selected content	Folder Contents List/ Contents List
Sort	Sorts items in Folder or Contents List	Folder Contents List/ Contents List
Search	Searches the desired items in Folder or Contents List by word	Media Navigator/Folder Contents List/Contents List
Slide Show Setup	Used to set up a slide-show on the Photo Player	Server List/Media Navigator/USB/My Playlist/ Playlist List (Movie/Music/ Photo)/Folder Contents List/Contents List/Photo Player
Add to My Playlist[a]	Adds the selected files to My Playlist	Folder Contents List/ Contents List/Movie Player/ Music Player/Photo Player
Select Server	Moves to the Server List screen	Media Navigator/Folder Contents List/Contents List
Stop Music[b]	Stops playback of a music file	Server List/Media Navigator/ Playlist List (Movie/ Music/Photo)/ Folder Contents List/ Contents List/Music Player/Photo Player
Change Name	Used to change content names in My Playlist	Playlist List (Movie/Music/ Photo)
Change view	Switches the screen display to List, Thumbnail, or Thumbnail List	Folder Contents List/ Contents List
Time Search	Starts playback at the preset time on the Movie or Music Player screen	Movie Player/Music Player
Slow Playback	Plays back in the slow mode on the Movie or Music screen	Movie Player
BGM Setup	Used to set up the slideshow BGM on the Photo Player	Photo Player
Move	Moves the order of content in My Playlist	Contents List (Playlist)
Delete from My Playlist[a]	Deletes the selected content from My Playlist	Contents List (Playlist)

a. When a file is selected
b. While music is played

Media Navigator

While navigating through the folders a media server provides, you can select the desired file to start the corresponding player by pressing **ENTER**.

Screen Components



1 Thumbnail of the file selected (if obtained)
2 Name of the server currently selected
3 Current menu level
4 Item being selected (highlighted in yellow)
5 File number/total number of files
6 Number of servers connected
7 Key guide

Note

- The Media Navigator is not launched depending on the option selected in *Auto Connection Setup* on page 85. The screen displays after selecting a server in the server list.

USB

Like navigating through the media servers, you can select the desired file contained in the device selected on the USB Devices List screen to start the corresponding player by pressing **ENTER**. You can also select the menu displayed on either **List**, **Thumbnail** or **Thumbnail List** screen. Press **ADV SURR** (Yellow) and select **Change view** from the Tool Menu.

Note

- The USB Devices List screen may not be displayed depending on the option selected in **Auto Connection Setup**. **Single Server/USB** is selected for **Auto Connection Setup** by default. You don't need to select a device in the USB Devices List when you use a single directory device (USB flash drive).

My Playlist

Each category (Movie, Music and Photo) has five different Playlists in which you can register up to 100 files each. The My Playlist option can contain sound and image files selected in the **Media Navigator**. To edit a Playlist, use the Tool Menu (page 75).

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select 'My Playlist' (↑/↓ then ENTER).

3 Select a Playlist list from 'Movie Playlist', 'Music Playlist' or 'Photo Playlist' (↑/↓ then ENTER).

4 Select the desired content (←/→ or ↑/↓ then ENTER).
The menu can be displayed as a **List**, **Thumbnail** or **Thumbnail List** screen. Press **ADV SURR** (Yellow) then select **Change view** from the Tool Menu (↑/↓ then **ENTER**).

5 Press ENTER to play or display.
To return to the previous screen, press **RETURN**.

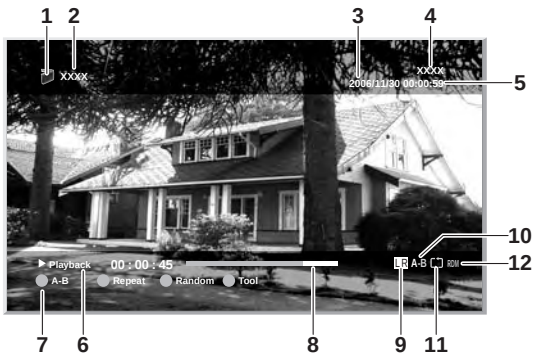
To exit Home Media Gallery, select other input source.

Enjoying movie files

You can display the menu as a **List**, **Thumbnail** or **Thumbnail List** screen. Press **ADV SURR** (Yellow) then select an option under **Change view** on the Tool Menu. You can also navigate through the subsequent or preceding menu levels in the server or USB device by pressing ↑/↓/←/→ or **ENTER**. When you select movie content from the server menu on the Media Navigator screen, the Movie Player automatically launches. Select a category, folder, or device to access the submenu containing the required file or content.

The Movie Player screen appears when you select a movie file from My Playlist, just like selecting a file in the server.

Screen Components



1 Movie icon
2 Title (File name, etc.)
3 Date
4 Album name
5 Play time
6 Play status
7 Key guide
8 Progress bar
9 Audio mode icon
10 A-B repeat mode icon
11 Repeat mode icon
12 Random mode icon (appears when the mode is valid)

Movie Player key guide

Button(s)	Function
ENTER	Pauses while playback or plays back while in **PAUSE**
⬅	Fast reverse during playback or when in **PAUSE**. Each press toggles the reverse speed among x 2, x 4, x 8, x 20, x 50, and x 100 or the slow mode speed among x 1/2, x 1/4, x 1/8, and x 1/16. When the beginning of the content is reached, it pauses.
➡	Fast forward while playback or **PAUSE**. Each press toggles the forward speed among x 2, x 4, x 8, x 20, x 50, and x 100 or the slow mode speed among x 1/16, x 1/8, x 1/4, and x 1/2. When the end of the content is reached, it pauses.
⬆	Skips 15 seconds backward and plays back or pauses while in **PAUSE**
⬇	Skips 15 seconds forward and plays back or pauses while in **PAUSE**
▶	Plays back the content
II	Pauses the playback
■	Stops the Player and returns to the previous screen (**List**/**Thumbnail**/**Thumbnail List**)
▶▶	Same as ➡ (only fast forward function while in the slow mode)
◀◀	Same as ⬅ (only fast reverse function while in the slow mode)
AUTO/DIRECT (Blue)	Sets A-B repeat mode. Sets the desired point A to start and B to end during playback. To cancel the mode, press **AUTO/DIRECT** (Blue) on the remote control.
STEREO/ F.S.SURR (Red)	Every press toggles the repeat mode among **No Repeat** and **Repeat Once** or among **No Repeat**, **Repeat Once** and **Repeat All** while in **Playlist**
STANDARD (Green)	Available only in **Playlist** or **Consecutive Playback** mode. Every press toggles the random mode between **Random Off** and **Random On**.
ADV SURR (Yellow)	Switches the Tool Menu display on and off. Even if the Tool Menu is displayed while content is played back, a movie is kept playing but the time counter and progress bar do not function.
DISP	Displays the Player status at the bottom of the screen while a movie is played back. Another press of the key displays a key guide, as well. Pressing the key once more cancels all the information display.
AUDIO	Every press of the key toggles the audio mode among **L + R**, **L** and **R**
RETURN	Same function as ■
VOL+, VOL–	Adjusts the sound volume
MUTE	Mutes the sound

Play modes		
Time Search	(Tool Menu)	Plays back the selected content from the time preset on the Movie Player
Slow Playback	(Tool Menu)	Plays back the content in slow mode on the Movie Player
Add to My Playlist	(Tool Menu)	Adds the selected content to My Playlist List
Stop Movie Player	■, **RETURN**	Stops the Movie Player
Fast Forward/ Fast Reverse	⬅/➡, ◀◀/▶▶	See the key guide table
Forward/ Reverse (15 sec.)	⬆/⬇	See the key guide table
Play	**ENTER**, ▶	See the key guide table
A-B Repeat Mode	**AUTO/ DIRECT** (Blue)	See the key guide table
Repeat Mode	**STEREO/ F.S.SURR** (Red)	See the key guide table
Random Mode	**STANDARD** (Green)	See the key guide table
(Tool Menu)	**ADV SURR** (Yellow)	See the key guide table

Note

- Some functions may not be supported depending on the server type or version used.
- During playback, an error may arise in time-related information depending on the content or server software.
- Some functions may not be supported depending on the content.

Time Search

1 In playback mode or PAUSE, press ADV SURR (Yellow), then select 'Time Search' from the Tool Menu (↑/↓ then ENTER).
A Time Search dialog screen appears.

2 Select 'Hour' and/or 'Minute' for 'Input Time' (↑/←/→ then ENTER).
Enter the desired time using buttons **0** to **9**.

3 Press ENTER after the entry is complete.

4 Select 'OK' (↓ then ENTER).
The movie begins playing from the time you set.

To cancel the Time Search, select '**Cancel**' and press **ENTER**.

Note

- This function may not be supported depending on the content or server software.
- An error may arise in time-related information depending on the content or server software.
- Only **Cancel** can be selected when you have entered a time exceeding the content's time range.

Slow Playback

1 In playback mode or PAUSE, press ADV SURR (Yellow) then select 'Slow Playback' from the Tool Menu (↑/↓ then ENTER).

2 Press ENTER.
Slow playback begins. You can change the playback speed by pressing ←/→ while in the slow mode.

To discontinue slow playback, press **ENTER** or ►. The system returns to the normal playback mode.

Note

- This function may not be supported depending on the content.

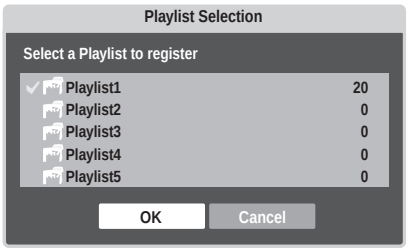
Add to My Playlist

1 While navigating or playing, select the file to be added to My Playlist (↑/↓/←/→ then ENTER).

2 Press ADV SURR (Yellow) then select 'Add to My Playlist' from the Tool Menu (↑/↓ then ENTER).
A Playlist Selection dialog screen appears.

3 Select a Playlist (↑/↓ then ENTER).
A check mark is provided beside the selected Playlist.

When you select a different Playlist and press **ENTER**, the mark jumps to the new Playlist from the previously selected one.



4 Select 'OK' (↓ then ENTER).
The file is added to the selected Playlist.

To cancel the operation, select '**Cancel**' then press **ENTER**.

Fast Forward/Fast Reverse

• While playing content, press and hold ← for Fast Reverse or press and hold → for Fast Forward.

Forward/Reverse (15 sec.)

• While playing content, press and hold ↑ or ↓ to jump backward or forward in 15-second increments.

A-B Repeat Mode

1 While playing content, press AUTO/DIRECT (Blue) where you want repeat to start.

2 Press AUTO/DIRECT (Blue) again where you want repeat to end.
The Player status appears on the screen and the A-B mode icon changes.

The selected movie scenes are repeatedly played back.

To return to normal mode, press **AUTO/DIRECT** (Blue) again while in the A-B repeat mode.

Note

- The A-B repeat function is only available during playback in normal mode.
- If the screen display doesn't match the player status, a malfunction may have occurred. Stop playback, then try the operation again.

Repeat Mode

1 While playing content in the Media Navigator or USB device, press STEREO/F.S.SURR (Red) to select 'Repeat Once'.
The title being played is repeated.

2 Press STEREO/F.S.SURR (Red) again to cancel the repeat mode ('Repeat Off' is selected).
After playing the currently selected title, the Player stops.

Note

- When playing content in the Playlist, you can select from **Repeat Off**, **Repeat All** (plays all items in the Playlist repeatedly) or **Repeat Once** (plays the content being watched repeatedly).

Random Mode

1 While playing content in the Playlist, press STANDARD (Green) to select 'Random On'.
Random Repeat playback starts.

2 Press STANDARD (Green) again to cancel the random mode ('Random Off' is selected).

Note

- The Random Repeat mode is only available for content in the Playlist, or in **Consecutive Playback** mode.

Enjoying music files

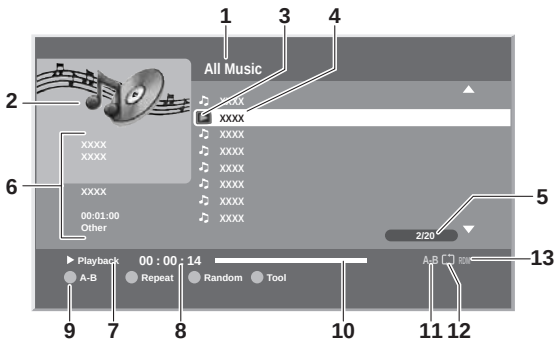
You can display the menu as a **List**, **Thumbnail** or **Thumbnail List** screen. Press **ADV SURR** (Yellow) then select an option under **Change view** on the Tool Menu. You can also navigate through the subsequent or preceding menu levels in the server or USB device by pressing ⬆/⬇/⬅/➡ or **ENTER**.

When you select music content from the server menu on the Media Navigator screen, the Music Player automatically launches. Select a category, folder, or device to access the submenu containing the required file or content. The Music Player screen appears when you select a music file from My Playlist, just like selecting a file in the server.

Note

- The Music Player only displays a **List** screen.

Screen Components



1 Category or Folder name
2 Jacket image (Music icon)
3 Playing Music icon
4 Contents list
5 Number of items
6 Detailed display
7 Play status
8 Time counter
9 Key guide
10 Progress bar
11 A-B repeat mode icon
12 Repeat mode icon
13 Random mode icon

Music Player key guide

Button(s)	Function
⬆	Moves up a cursor to a title above
⬇	Moves down a cursor to a title below
ENTER	Plays back the selected music content. Pauses the music content being played if it is highlighted in the Playlist screen or plays the selected music content if different content is highlighted by pressing ⬆/⬇.
⬅	Fast reverse during playback or when in **PAUSE**. Each press toggles the reverse speed among x 2, x 4, x 8, x 20, x 50, and x 100. When the beginning of the content is reached, it pauses.
➡	Fast forward during playback or when in **PAUSE**. Each press toggles the forward speed among x 2, x 4, x 8, x 20, x 50, and x 100. When the end of the content is reached, it pauses.
RETURN	Returns to the previous screen (**List**/**Thumbnail**/**Thumbnail List**). Content being played does not stop.

Button(s)	Function
►	Plays back the selected content. Pauses while in playback and plays while in **PAUSE**.
II	Pauses the playback
■	Stops the Player and does not return to the previous screen (Selecting the **Stop Music** from the Tool Menu also stops the Player.)
►►	Same as ➡.
◄◄	Same as ⬅.
AUTO/DIRECT (Blue)	Sets A-B repeat mode. Sets the desired point A to start and B to end during playback. To cancel the mode, press **AUTO/DIRECT** (Blue) on the remote control.
STEREO/ F.S.SURR (Red)	Every press toggles the repeat mode among **No Repeat**, **Repeat Once** and **Repeat All**
STANDARD (Green)	Every press toggles the random mode among **Random Off** and **Random On**
ADV SURR (Yellow)	Displays the Tool Menu. Even if the Tool Menu is displayed while content is played back, music is kept playing but the time counter and progress bar do not function.
VOL+, VOL–	Adjusts the sound volume
MUTE	Mutes the sound

Note

- Files may not be played back properly depending on the content.

Play modes		
Add to My Playlist	(Tool Menu)	Adds the selected content to My Playlist List
Time Search	(Tool Menu)	Plays back the selected content from the time preset on the Music Player
Stop Music	(Tool Menu), ■	Stops the Music Player
Fast Forward/ Fast Reverse	⬅/➡, ◄◄/►►	See the key guide table
Moves Up/ Down a cursor	⬆/⬇	See the key guide table
Play	**ENTER**, ►	See the key guide table
A-B Repeat Mode	**AUTO/ DIRECT** (Blue)	See the key guide table
Repeat Mode	**STEREO/ F.S.SURR** (Red)	See the key guide table
Random Mode	**STANDARD** (Green)	See the key guide table
(Tool Menu)	**ADV SURR** (Yellow)	See the key guide table

- Setup procedures for the above play modes are the same as for the Movie Player.
- Refer to page 75 for the color button **ADV SURR** (Yellow) (Tool Menu).

Note

- Some functions may not be supported depending on the server type or version used.
- Playback continues even when you move from the Player screen to the previously selected screen by pressing **RETURN**.

A-B Repeat Mode

1 While playing content, press AUTO/DIRECT (Blue) where you want repeat to start.

2 Press AUTO/DIRECT (Blue) again where you want repeat to end.
The Player status appears on the screen and the A-B repeat mode icon changes.

The selected part of the title is repeatedly played back.

To return to normal mode, press **AUTO/DIRECT** (Blue) again while in the A-B repeat mode.

Note

- The A-B repeat function is only available during playback in normal mode.

Repeat Mode

1 While playing content in the Media Navigator, USB device or Playlist, press STEREO/F.S.SURR (Red) to select 'Repeat All'.
All titles in the folder or Playlist are played repeatedly.

2 Press STEREO/F.S.SURR (Red) again to cancel the repeat mode ('Repeat Once' is selected).
The title being played is repeated.

3 Press STEREO/F.S.SURR (Red) once more to cancel the repeat mode ('Repeat Off' is selected).
After playing the currently selected title, the Player stops.

Random Mode

1 While playing content in the Playlist, press STANDARD (Green) to select 'Random On'.
Random Repeat playback starts.

2 Press STANDARD (Green) again to cancel the random mode ('Random Off' is selected).

Enjoying photo files

You can display the menu as a **List**, **Thumbnail** or **Thumbnail List** screen. Press **ADV SURR** (Yellow) then select an option under **Change view** on the Tool Menu. You can also navigate through the subsequent or preceding menu levels in the server or USB device by pressing ⬆/⬇/⬅/➡ or **ENTER**.

When you select photo content from the server menu on the Media Navigator screen, the Photo Player automatically launches. The selected content is displayed in full screen by pressing **ENTER**. Select a category, folder or device to access the submenu containing the required file or content.

Pressing **ENTER** again allows a slideshow to begin. After a slideshow launches, pressing **ENTER** toggles between **PLAY** and **PAUSE**. Instead of pressing **ENTER** twice, you can press ► to start the slideshow immediately.

The Photo Player screen appears when you select a photo file from My Playlist, just like selecting a file in the server.

Screen Components

1 Photo icon
2 File name
3 Folder name, etc.
4 Date
5 Number of items*
6 Play status*
7 Key guide
8 Progress bar*
9 Repeat mode icon
10 Random mode icon

* Displays only when playing the slideshow.

Photo Player key guide

Button(s)	Function
ENTER	Starts displaying a photo or playing a slideshow. Pauses while playback or plays back while in **PAUSE**.
RETURN	Stops the Player and returns to the previous screen (**List**/**Thumbnail**/**Thumbnail List**)
⬅, ⬆	Displays the previous image content
⬇, ➡	Display the next image content
►	Plays a slideshow
II	Pauses the slideshow
■	Stops the Player and returns to the previous screen (**List**/**Thumbnail**/**Thumbnail List**)
►►	Rotates the image 90º clockwise. Each press toggles the rotation angle by 90º among **90º**, **180º**, **270º** and **0º**.
◄◄	Rotates the image 90º counter-clockwise. Each press toggles the rotation angle by 90º among **270º**, **180º**, **90º**, and **0º**.
AUTO/DIRECT (Blue)	Rotates the image 90º clockwise. Each press toggles the rotation angle by 90º among **90º**, **180º**, **270º** and **0º**.
STEREO/ F.S.SURR (Red)	Available only when playing the slideshow. Every press toggles the repeat mode between **No Repeat** and **Repeat All**
STANDARD (Green)	Available only when playing the slideshow. Every press toggles the random mode between **Random Off** and **Random On**
ADV SURR (Yellow)	Displays the Tool Menu. If the Tool Menu is displayed while a slideshow is played, the slideshow and BGM are paused.
DISP	Displays the Player status at the bottom of the screen while image content is played. Another press of the key displays a key guide, as well. No Player information is displayed when an image is shown in full screen (no slideshow has been started). Other information may display. Pressing the key once more cancels all the information display.
VOL+, VOL–	Adjusts the sound volume
MUTE	Mutes the sound

Play modes		
BGM Setup	(Tool Menu)	Sets up BGM
Slide Show Setup	(Tool Menu)	Allows various slideshow setups on the Photo player
Add to My Playlist	(Tool Menu)	Adds the selected content to My Playlist List
Stop Photo Player	■, **RETURN**	Stops the Photo Player
Move File Forward/ Backward	(⬆/⬇/⬅/➡)	See the key guide table
Slideshow	**ENTER**, ►	See the key guide table

Play modes		
Rotate	**AUTO/ DIRECT** (Blue), ◄◄/►►	See the key guide table
Repeat Mode	**STEREO/ F.S.SURR** (Red)	See the key guide table
Random Mode	**STANDARD** (Green)	See the key guide table
(Tool Menu)	**ADV SURR** (Yellow)	See the key guide table

- Setup procedures for the above play modes are the same as for the Movie Player.
- Refer to page 75 for the color button **ADV SURR** (Yellow) (Tool Menu).

Note

- Some functions may not be supported depending on the server type or version used.
- In rare cases, the image on the screen may appear jagged when photo content is selected directly from a USB device. If this is the case, the problem may be solved by viewing the photo content through the network after having transferred it to the server PC.
- Even with the supported format, files may not be played properly depending on the content.

Setting up the slideshow

You can enjoy a slideshow with music in the background. To activate this feature, you must register music content in My Playlist List beforehand (see *My Playlist* on page 76 and *Setting up BGM for the slideshow* below).

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

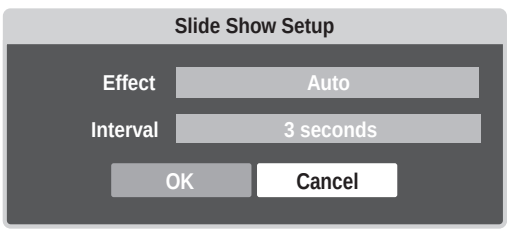
2 Select 'Media Navigator' (⬆/⬇ then ENTER).

3 Press ADV SURR (Yellow).
A pop-up screen of the Tool Menu appears.

4 Select 'Slide Show Setup' (⬆/⬇ then ENTER).

5 Select the desired setup item (⬆/⬇ then ENTER).

6 Enter the setting in the 'Effect' or 'Interval' box (⬆/⬇ then ENTER).
Repeat steps 5 and 6 to enter another setup.



7 Select 'OK' (⬇ then ENTER).
The slideshow setup finishes.

Note

- After setting the **Interval** time, it may take longer than the preset time as the **Interval** time means the time up until the Home Media Gallery starts obtaining the next image. Key operations may not work while obtaining the next image.

Setting up BGM for the slideshow

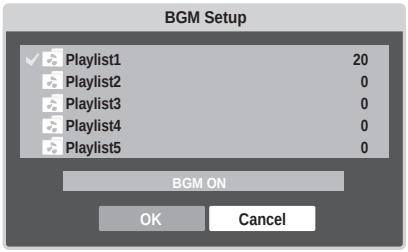
1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select photo content in the Media Navigator, USB device or My Playlist (⬆/⬇/⬅/➡ then ENTER).
The Photo Player launches and photo content is displayed in full screen.

3 Press ADV SURR (Yellow) then select 'BGM Setup' from the Tool Menu (⬆/⬇ then ENTER).
A BGM Setup dialog screen appears.

4 Select a Playlist from the list as BGM (⬆/⬇ then ENTER).
A check mark is provided beside the selected Playlist.

When you select a different Playlist and press **ENTER**, the mark jumps to the new Playlist from the previously selected one.



5 Select 'BGM ON', 'BGM ON (Random)' or 'BGM OFF' from the BGM status box (⬆/⬇ then ENTER).

6 Select 'OK' (⬇ then ENTER).

Note

- When a slideshow is started while a music file is playing, playback of the music file continues.

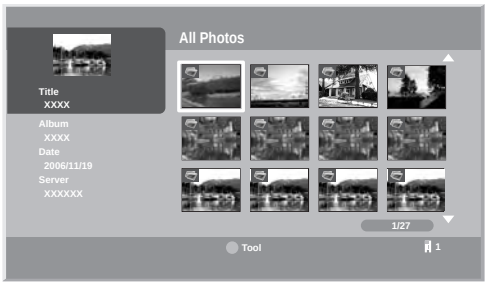
Starting the slideshow

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select a folder containing photo content (↑/↓ then ENTER).
The Thumbnail screen is displayed (Thumbnail List or List screen is displayed depending on the setting).

3 Select the desired photo file from the Thumbnail screen (↑/↓/←/→ then ENTER).
The photo content is displayed in full screen.

You can start a slideshow by pressing ► on the **Thumbnail** screen.



4 Press ENTER or ► to start a slideshow.
The slideshow starts and photo images in the folder automatically display one by one. See *Setting up the slideshow* on page 82 for setting up the interval time.

To display a key guide, press **DISP**.

To display the next image content manually, press ↓ or →.

To display the previous image content manually, press ← or ↑.

5 Press ENTER or II to stop the slideshow.
The Photo Player goes into **PAUSE**.

6 Press ENTER again to resume the slideshow.
To cancel the slideshow and stop the Photo Player, press **RETURN** or ■ during the playback. The previous screen returns.

Note

- When you press ↑/↓/←/→, ◄◄/►► while photo content is displayed, the Photo Player goes into **PAUSE**.

Rotating the image

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select photo content in the Media Navigator, USB device or My Playlist (↑/↓/←/→ then ENTER).
The photo content is displayed in full screen. To stop the slideshow, press **ENTER** again.

3 Press ENTER or ► to start a slideshow.
The slideshow starts and photo images in the folder automatically display one by one.

To display a key guide, press **DISP**.

4 While using Photo Player, press AUTO/DIRECT (Blue) to rotate a photo.
The displayed image rotates by one quarter clockwise. Each time **AUTO/DIRECT** (Blue) is pressed, the image rotates; **90º**, **180º**, **270º** and **Rotate Off**.

The Photo Player goes into **PAUSE** (the slideshow is in Stop mode).

5 Press ENTER again to resume the slideshow.
The selected rotation mode is only effective for the image being displayed. The default setting (**Rotate Off**) returns when you move and display content on a different screen.

Repeating the slideshow

1 While playing a slideshow, press STEREO/F.S.SURR (Red) to select 'Repeat All'.
The slideshow being played is repeated.

2 Press STEREO/F.S.SURR (Red) again to cancel the repeat mode ('Repeat Off' is selected).
After playing the currently selected slideshow, the Player stops.

Playing the slideshow at random

1 While playing a slideshow, press STANDARD (Green) to select 'Random On'.
Random playback starts.

2 Press STANDARD (Green) again to cancel the random mode ('Random Off' is selected).

Other useful functions

Search

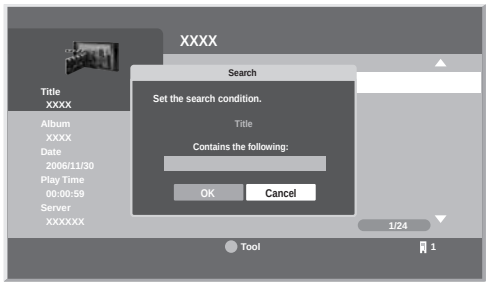
You can search the desired items contained in the Folder or Contents List by word. Searched results are displayed on the screen.

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select the desired folder and/or content in the Media Navigator (↑/↓/←/→ then ENTER).

3 Press ADV SURR (Yellow) then select 'Search' from the Tool Menu (↑/↓ then ENTER).
A Search dialog screen appears.

4 Select the 'Contains the following' box in 'Set the search condition:' (↑ then ENTER).
The software keyboard appears on the screen.



5 Enter the word for search on the software keyboard (↑/↓/←/→ then ENTER).

6 Select 'OK' on the software keyboard (↑/↓ then ENTER).
The software keyboard disappears.

To cancel the search, select '**Cancel**' then press **ENTER**.

7 Select 'OK' on the 'Search' dialog screen (↓ then ENTER).
The searching starts based on the word entered and search results are displayed.

Even while searching, you can select content to play. To return to the search screen, press **RETURN** during playback.

8 Press RETURN to cancel the search mode.

Note

- Search may not be available depending on the server used.

Sort

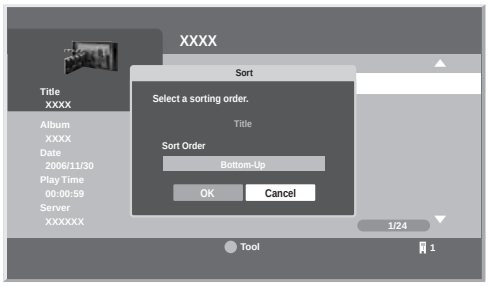
You can sort the items contained in the Folder or Contents List.

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select the desired folder and/or content in the Media Navigator (↑/↓/←/→ then ENTER).

3 Press ADV SURR (Yellow) then select 'Sort' from the Tool Menu (↑/↓ then ENTER).
A Sort dialog screen appears.

4 Select 'Bottom-Up' or 'Top-Down' in the 'Sort Order' box (↑ then ENTER).



5 Select 'OK' on the 'Sort' dialog screen (↓ then ENTER).
The sorting starts based on your selection and sort results are displayed.

Even while sorting, you can select content to play. To return to the sort screen, press **RETURN** during playback.

6 Press RETURN to cancel the sort mode.

Note

- The **Select a sorting order.** screen can be displayed while navigating through the music categories.

Adding files to My Playlist

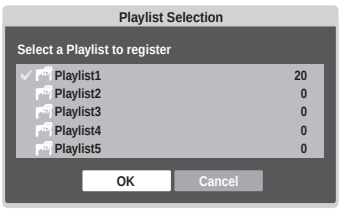
The Home Media Gallery function provides **My Playlist** - a self-contained play list that allows you to bookmark your favorite movie, music and photo files from the network. You can register, edit, and sort up to 100 files in each Playlist List.

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select 'Media Navigator' (↑/↓ then ENTER).

3 Select the desired music content to add to 'My Playlist' (↑/↓ then ENTER).

4 Press ADV SURR (Yellow), then select 'Add to My Playlist' from the Tool Menu (↑/↓ then ENTER).
A dialog screen appears.



5 Select the Playlist to which you want to add the contents (↑/↓ then ENTER).
A check mark is provided in the box at the selected Playlist List.

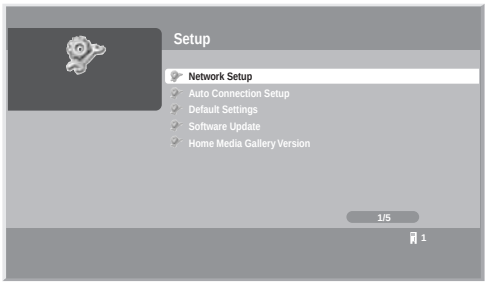
6 Select 'OK' on the 'Playlist Selection' dialog screen.
The selected content is added to the Playlist.

Note

- When giving a slideshow of photo content, you can use Music Playlist as for background music.

Setup

The **Setup** is used for **Network Setup**, **Auto Connection Setup**, **Default Settings**, **Software Update** and **Home Media Gallery Version**.



1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select 'Setup' (↑/↓ then ENTER).

3 Select 'Network Setup', 'Auto Connection Setup', 'Default Settings', 'Software Update' and 'Home Media Gallery Version' (↑/↓ then ENTER).

Network Setup

When you select **Network Setup** from the **Setup** menu, a submenu is displayed to select **Auto** or **Manual** for network connections.

To automatically set:

The following setup is effective for **Auto** only. To perform the procedure, DHCP on your server or router must be valid.

1 Select 'Automatically acquire IP' then press ENTER (↑ then ENTER).

2 Select 'Yes' (↑/↓ then ENTER).

3 Select 'OK' (↓ then ENTER).
A restart dialog screen appears.

4 Press ENTER again on the dialog screen.
The setup finishes.

The system restarts then the Home Media Gallery screen returns.

To manually set:

Before setting up, check your media server for IP Address and Subnet mask.

1 Select 'Automatically acquire IP' then press ENTER (↑ then ENTER).

2 Select 'No' (↑/↓ then ENTER).

3 Select the setup item's box (↑/↓/←/→ then ENTER).
The screen turns to entry mode for **IP Address** and **Subnet mask**.

No need to enter **Default Gateway** and **DNS Server**.

4 Enter the figures using buttons 0 to 9.
Subnet mask (such as 255.255.255.0)
Enter the same figures as you checked.

IP Address (such as 192.168.201.***)
Enter the same figures as used in the media server (PC, etc.) you use. For ***, enter 3-digit figures (0 – 254) that have not been used for network connections yet.

5 Press ENTER on the setup item's box after the entry is complete.
The screen turns to setup selection mode.

Repeat steps 2 to 4 to complete the necessary setup.

6 Select 'OK' (↓ then ENTER).
A restart dialog screen appears.

7 Press ENTER again on the dialog screen.
The setup finishes.

The system restarts then the Home Media Gallery screen returns.

Auto Connection Setup

When you enjoy content on the network, you can select from the following options: **Last Connected Server** and **Single Server/USB**. See *Auto Connection Setup* on page 88.

For USB content, the Device List is displayed on the screen if you have not checked in the **Single Server/USB** box after selecting **Setup** and then **Auto Connection Setup**. You can select the desired device and then content in it. If you have checked in the box, the list is skipped (default setting) and you can see the folder(s) or file(s) in the USB device that has a single directory.

Default Settings

Setups you have entered within the Home Media Gallery function return to default. When you select '**Reset**', a confirmation screen **To activate the default settings, restart Home Media Gallery.** will appear. Press **ENTER** to reset to default. When you select '**Cancel**', the previous screen displays (← then **ENTER**).

Note

- Be sure to stop playback when resetting to default.

Software Update

Information on software updates may be posted on the Pioneer website.
http://www.pioneer.eu

Home Media Gallery Version

You can confirm the version and copyright information on the Home Media Gallery software. Select '**OK**' to return to the previous screen (**ENTER**).

Editing files in My Playlist

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select 'My Playlist' (↑/↓ then ENTER).

3 Select 'Movie Playlist', 'Music Playlist' or 'Photo Playlist' from the Playlist category (↑/↓ then ENTER).
Five playlists are displayed.

Playlist names can be changed with the **Change Name** command. The order of files in a playlist can be changed using the **Move** command. Files can be deleted from playlists using the **Delete from My Playlist** command. For details, refer to the descriptions of the individual commands.

Change Name

1 Choose the playlist whose name you want to change, then press ADV SURR (Yellow) (↑/↓).

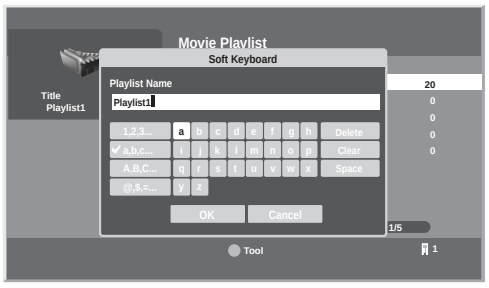
2 Select 'Change Name' from the Tool Menu (↑/↓ then ENTER).
A dialog screen appears.

3 Select 'Playlist Name' (↑ then ENTER).
The software keyboard appears.

4 Select 'OK' on the software keyboard (↑/↓/←/→ then ENTER).
The software keyboard disappears and Playlist Name in the Change Name dialog screen returns.

5 Select 'OK' when the new name is entered (↓ then ENTER).
The editing finishes and Change Name dialog screen disappears.

The new Playlist displays.



The on-screen keyboard (**Software Keyboard**) is displayed only when you select '**Search**' or '**Change Name**'.

Move

You can change the listing order of the content registered in My Playlist.

1 Choose the playlist for which you want to change the order of the contents (↑/↓ then ENTER).

2 Press ADV SURR (Yellow).

3 Select 'Move' from the Tool Menu (↑/↓ then ENTER).
The content selected is placed in a yellow box (**Source Selection** mode).

4 Select the desired content (↑/↓ then ENTER).
The selected content is highlighted in the yellow box. A specific icon appears on the left (**Destination Selection** mode).

5 Press ↑/↓ to move the content up or down, then ENTER.
The highlight in the yellow box disappears and the specific icon returns to the original one.

Repeat steps 2 and 3 to move another content.

6 Press RETURN.
A **Playlist** dialog screen appears.

7 Select 'OK' (← then ENTER).
The dialog screen disappears and moving content finishes.

To cancel, select '**Cancel**' then **ENTER**.

Delete from My Playlist

1 Choose the playlist from which you want to delete contents (↑/↓ then ENTER).

2 Choose the contents you want to delete, then press ADV SURR (Yellow) (↑/↓).

3 Select 'Delete from My Playlist' from the Tool Menu (↑/↓ then ENTER).
A dialog screen appears.

4 Select 'OK' (← then ENTER).
The dialog screen disappears and the selected content is deleted from My Playlist.

To cancel, select '**Cancel**' then **ENTER**.

Playing/displaying files from My Playlist

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select 'My Playlist' (↑/↓ then ENTER).

3 Select the desired Playlist from 'Movie Playlist', 'Music Playlist' or 'Photo Playlist'.

4 Select the desired Playlist List (↑/↓ then ENTER).

5 Select the desired content (↑/↓/←/→ then ENTER).
The selected content is played or displayed.

To return to the previous screen, press **RETURN**.

Switching the server

When one or more servers are connected within the network, you can switch between servers.

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select 'Media Navigator' (↑/↓ then ENTER).
The previous server is selected.

3 Press ADV SURR (Yellow) to open the Tool Menu.

4 Choose 'Select Server' (↑/↓ then ENTER).
The Server List is displayed.

Pressing **RETURN** changes the screen to the Home Media Gallery.

5 Select the desired server (↑/↓ then ENTER).
The screen changes to **Media Navigator** on the selected server.

Note

- The Home Media Gallery can memorize previously connected servers. When the Media Navigator is launched, available servers are automatically searched and connected. To switch between connected servers, choose server to another one, select '**Select Server**' from the Tool Menu.
- If a previously connected server can not be found or if the server is in the sleep mode, the server name is dimmed (grayed out).
- You cannot select a server unless that media server has been set up.

Resetting to default

You can reset the setups you have entered within the Home Media Gallery function to default (see *Default Settings* on page 85).

1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select 'Setup' (↑/↓ then ENTER).

3 Select 'Default Settings' (↑/↓ then ENTER).

4 Select 'Reset' (← then ENTER).
A restart dialog screen appears.

5 Press ENTER on the dialog screen.
The setup finishes.

The system restarts then the Home Media Gallery screen returns.

Other convenient features

Screen saver

During navigation, the screen saver launches automatically if no activity is sensed within five minutes.

- No screen saver is available while a movie or slideshow is played.
- Pressing any key cancels screen saver. When canceled with a USB device being connected, connecting operation resumes.

Software Update

Information on software updates may be posted on the Pioneer website.
http://www.pioneer.eu

Confirming the existing Home Media Gallery version

Be sure to check the version of the software you are using before updating the software. You can check it with the following procedure.

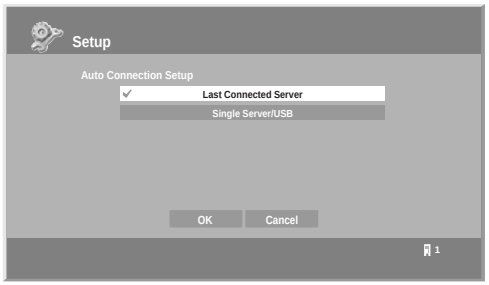
1 Press HOME MEDIA GALLERY.
The Home Media Gallery screen is displayed.

2 Select 'Setup' (↑/↓ then ENTER).

3 Select 'Home Media Gallery Version' (↑/↓ then ENTER).
Jot down the Home Media Gallery Version displayed in the screen.
Ex.) software Version: 1.0.xxxAVR

4 Select 'OK' to return to the previous screen (ENTER).

Auto Connection Setup	
For extra convenience, you can toggle between the following features:	
Last Connected Server	This function stores the server last accessed in the memory, allowing direct server access the next time without displaying the Server List screen.
Single Server/ USB	This function is used only when a USB flash drive or a single server is connected. You do not need this function when a multi-card reader, or two or more servers are connected. **USB:** When USB flash drive is connected, the Devices List is skipped as long as you have checked in the **Single Server/USB** box. If not, the list may be displayed at any time. **Media Navigator (Server):** When a single server is connected, the Server List is skipped as long as you have checked in the **Single Server/USB** box. If not, the list may be displayed at any time. When the **Last Connected Server** box is checked, the other server setup option – **Single Server/USB** – becomes invalid.



Glossary

Default Gateway

Default gateway is a node on a computer network that serves as an access point to another network. A default gateway (such as a computer and router) is used to forward all traffic that is not addressed to a station within the local subnet.

DHCP (Dynamic Host Configuration Protocol) Server

Provides a mechanism to allocate IP addresses to client hosts. In most cases, a broadband router serves as a DHCP server in a home network.

DLNA (Digital Living Network Alliance)

The DLNA authorized logo makes it easy for consumers to recognize products that meet the new standard for home network PCs and other digital devices, as set down in the DLNA Guidelines for interoperability. This allows music, video, etc. to be enjoyed from various devices over a home network. This unit is compatible with music, photo and video content, and is based on the DLNA Home Networked Device Interoperability Guidelines v1.0. This unit can be used to playback music, photos and video stored on a DLNA-compatible server connected through a LAN cable.

Digital Living Network Alliance (DLNA) is dedicated to the simplified sharing of digital content, such as digital music, photos and video among networked consumer electronics (CE) and PCs. By establishing a platform of interoperability based on open industry standards, DLNA delivers technical design guidelines that companies can use to develop digital home products that share content through wired or wireless networks in the home.

DNS (Domain Name Service) Server

DNS Server is a server that determines the name of network-computer within the Internet. The server functions to exchange IP address to the hostname, hostname to the IP address.

Ethernet

A frame-based computer networking technology for local area networks (LANs). This amplifier supports 100BASE-TX.

IP (Internet Protocol) Address

A unique number that devices use in order to identify and communicate with each other on a network utilizing the Internet Protocol standard, such as “192.168.1.xxx”. No duplicate numbers are allowed within the network.

LAN Cable
A cable that has an eight-pin modular plug on each end and is different from a telephone plug which has four pins. A straight cable is used when connecting this amplifier to a home network via a hub. A cross-over cable is used when connecting directly to a PC. Use category 5 (CAT-5) LAN cables.

MAC (Media Access Control) Address
An address attached to the port of any network device with an IP address. The MAC address is expressed as "00:e0:36:xx:xx:xx" and cannot be changed.

Mass Storage Class devices
The standard provides an interface to a variety of storage devices, such as USB flash drive and digital cameras.

PlaysForSure
This unit incorporates PlaysForSure. "PlaysForSure" is a new logo program from Microsoft Corporation. You can check for the PlaysForSure logo at various online stores. Where you see the PlaysForSure logo, you can be sure that the digital media you are purchasing (music, video, pictures) will play on this unit.

Subnet mask
Used when IP addresses are broken into several parts. It is expressed as "255.255.255.0". In most cases, the Subnet mask is automatically assigned by the DHCP server.

UPnP (Universal Plug and Play)
Architecture for pervasive peer-to-peer network connectivity of devices of all form factors. It is designed to bring easy-to-use, flexible, standardsbased connectivity to ad-hoc or unmanaged networks whether in the home, in a small business, public spaces, or attached to the Internet.

USB (Universal Serial Bus)
USB provides a serial bus standard for connecting devices, usually to computers such as PCs. This amplifier supports the Mass Storage Class.

Windows Media Connect
Microsoft Windows Media Connect is a new technology to distribute music, photos and video stored on a PC with Windows XP installed to a stereo system of TV. Using this technology you can playback files stored on the PC from various devices wherever you like in your home.

Windows Media DRM
Windows Media DRM is copyright protection technology developed by Microsoft Corporation. It enables content providers to distribute over the Internet music, video and other digital media content in a protected, encrypted file format.

Windows Media Player
A free digital media player application provided by Microsoft that is used for playing audio, video and images on PCs.

Windows Media Player 11
The functionality of Windows Media Connect has been integrated into this version of Windows Media Player. After installing Windows Media Player 11 Windows Media Connect will not function. See Microsoft's website for details.

Details of compatible formats
See *Supported file formats* on page 71 for a list of the file extensions with which this amplifier is compatible.[1]

Compatible movie file formats
- **MPEG-1/2 PS**
  Up to 1280 x 720 (720p)
- **MPEG-2 TS/TTS**
  Up to 1280 x 720 (720p)
- **WMV (not copyright protected)**
  Up to 1280 x 720 (720p)
- **WMV (copyright protected)**
  Up to 720 x 480 (480p)
- **MPEG-4**
  Up to 1280 x 720 (720p)

Compatible audio file formats
- **MPEG-1 Audio Layer 3 (MP3)**
  Sampling frequency: Up to 48 kHz
  Bit rate: Up to 320 kbps
  No. channels: Up to 2
- **MPEG-4 AAC (AAC LC)**
  Sampling frequency: Up to 48 kHz
  Bit rate: Up to 320 kbps
  No. channels: Up to 2
- **Linear PCM (LPCM)**
  Sampling frequency: 8 kHz to 64 kHz
  Quantization bits: 16
  No. channels: Up to 2

Note

1 • Files stored on USB memory devices and protected by digital copyright management (DRM/WMDRM) cannot be played.
• Files protected by digital copyright management (DRM/WMDRM) can only be played when connected to a DRM/WMDRM-compatible media server.

- **WAV**
  Sampling frequency: 8 kHz to 64 kHz
  Quantization bits: 16
  No. channels: Up to 2
- **Windows Media Audio 9 (WMA9)**
  Sampling frequency: Up to 48 kHz
  Bit rate: Up to 768 kbps
  No. channels: Up to 2
- **Windows Media Audio 9 Professional (WMA9 Pro)**
  Sampling frequency: Up to 48 kHz
  Bit rate: Up to 768 kbps
  No. channels: Up to 6*

* Multi-channel audio signals are down-mixed to 2 channels.

Compatible image file formats

- **JPEG**
  Resolution:
  – Up to 8192 x 8192 pixels (YUV444, YUV422, YUV420)
  – 1280 x 768 pixels (RGB and grayscale)
  (This amplifier is not compatible with progressive JPEG images.)
- **BMP**
  Resolution: No restrictions
- **PNG**
  Resolution: Up to 2048 x 1024 pixels
- **TIFF**
  Resolution: Up to 2048 x 1024 pixels
  Compression format: Uncompressed, ZIP, LZW, Packbits, Huffman RLE, CCITT Fax 3/4
- **GIF**
  Resolution: Up to 2048 x 1024 pixels
  (This amplifier is not compatible with animated GIF images.)

Chapter 9

HDMI Control

By connecting this amplifier to an HDMI Control-compatible Pioneer plasma television or the HDD/DVD recorder with an HDMI cable, you can control this amplifier from the remote control of a connected plasma television, as well as have the connected plasma television automatically change inputs in response to operations carried out on this unit.

Refer to the operating manual for your plasma television for more information about which operations can be carried out by connecting via HDMI cable.

- You cannot use this function with components that do not support HDMI Control.
- We cannot guarantee this unit will work with HDMI Control-compatible components other than those made by Pioneer.

Making the HDMI Control connections

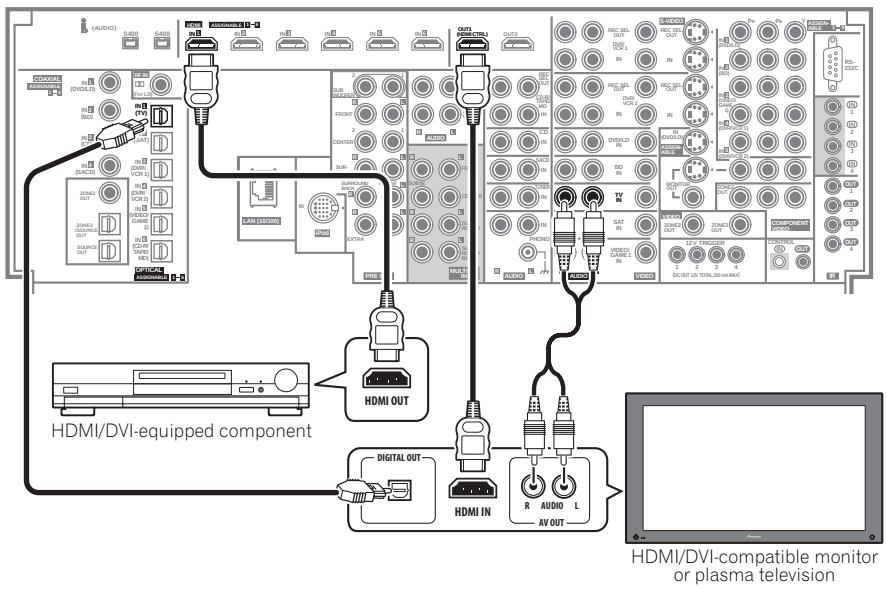
You can use synchronized operation for a connected plasma television and up to six other components.

Be sure to connect the plasma television's audio cable to the audio input of this unit.

Important

- When connecting this system or changing connections, be sure to switch the power off and disconnect the power cord from the wall socket. After completing all connections, connect the power cords to the wall socket.
- After connecting this amplifier to an AC outlet, a 15 second initialization process begins. You cannot carry out any operations during initialization. The HDMI indicator on the display unit blinks during initialization, and you can turn this amplifier on once it has stopped blinking.
- To get the most out of this function, we recommend that you connect your HDMI component not to a plasma television but rather directly to the HDMI terminal on this amplifier.
- To use the HDMI control function, connect this amplifier and plasma television using the **HDMI OUT 1** terminal. Connecting the HDMI control compatible component using the **HDMI OUT 2** terminal may result in malfunction. If this happens, turn off the HDMI control compatible component's HDMI control setting.
- HDMI Control is compatible with up to six units, 3 DVD or Blu-ray disc players and 3 DVD or Blu-ray disc recorders. (The maximum number of units may differ depending on the connected plasma television.)

SC-LX90



Setting the HDMI options

You must adjust the settings of this amplifier as well as HDMI Control-compatible connected components in order to make use of the HDMI Control function. For more information see the operating instructions for each component.

Setting the HDMI Control mode

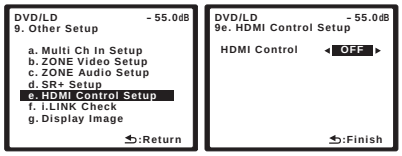
Choose whether to set this unit's HDMI Control function **ON** or **OFF**. You will need to set it to **ON** to use the HDMI Control function.

- When using a TV not manufactured by Pioneer, put this setting to **OFF**.

1 Set the operation selector switch to AMP, then press the SETUP button.

2 Select 'Other Setup', then press ENTER.

3 Select 'HDMI Control Setup' from the Other Setup menu.



4 Select the 'HDMI Control' setting you want.

- **ON** – Enables the HDMI Control function. When this unit's power is turned off and you have a supported source begin playback while using the HDMI Control function, the audio and video output from the HDMI connection are output from the plasma television.[1]
- **OFF** – The HDMI Control is disabled. Synchronized operations cannot be used. When this unit's power is turned off, audio and video of sources connected via HDMI are not output.

5 When you're finished, press SETUP.

You will finish to System Setup menu.

Before using synchronization

Once you have finished all connections and settings, you must:

1 Put all components into standby mode.

2 Turn the power on for all components, with the power for the plasma television being turned on last.

3 Choose the HDMI input to which the TV is connected to this amplifier, and see if video output from connected components displays properly on the screen or not.

4 Check whether the components connected to all HDMI inputs are properly displayed.

Synchronized amp mode

Synchronized amp mode begins once you carry out an operation for the plasma television. For more information, see the operating manual of your plasma television.

Synchronized amp mode operations

By connecting a component to this amplifier with an HDMI cable you can use synchronized amp mode, which allows you to synchronize the following operations[2]:

- Displays on the plasma television when you mute or adjust the volume of this amplifier.
- The input of this amplifier is automatically changed when playback occurs on a connected component.
- Even if you change this amplifier's input to a device that is not connected by HDMI, the synchronized amp mode remains in effect.
- This amplifier's input switches automatically when the channel is switched on an HDMI control-compatible plasma television.
- This amplifier's OSD language switches automatically when the menu language is switched on an HDMI control-compatible plasma television.
- By pressing **GENRE** when listening to a source from a HDD/DVD recorder, the most appropriate listening mode is automatically selected (see *Using the genre synchronizing function* on page 39 for more on this).

Canceling synchronized amp mode

Operate the plasma television to cancel the synchronized amp mode.

If you cancel synchronized amp mode while connected via HDMI to a plasma television or while you are watching a TV programme, the power for this unit is turned off.

Note

1 • When **HDMI Control** is set to **ON**, the audio/video signals input at the **HDMI IN** terminals are output at the **HDMI OUT** terminal even when this amplifier is switched off.
• With **HDMI Control** set to **ON**, Input Setup and HDMI Input are automatically set to OFF.

2 The linked mode remains in effect even when this amplifier's input is switched to something other than HDMI.

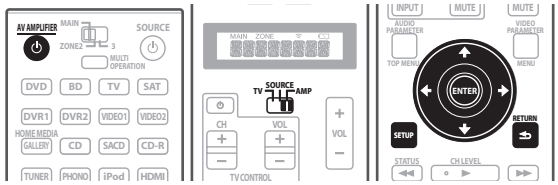
About HDMI Control

- Connect the plasma television directly to this amplifier. Interrupting a direct connection with other amps or an AV converter (such as an HDMI switch) can cause operational errors.
- Only connect components you intend to use as a source to the HDMI input of this amplifier. Interrupting a direct connection with other amps or an AV converter (such as an HDMI switch) can cause operational errors.

Chapter 10:
Other Settings

The Input Setup menu

You only need to make settings in the Input Setup menu if you didn't hook up your digital equipment according to the default settings (see *Input function default and possible settings* on page 95). In this case, you need to tell the amplifier what equipment is hooked up to which terminal so the buttons on the remote control correspond to the components you've connected.



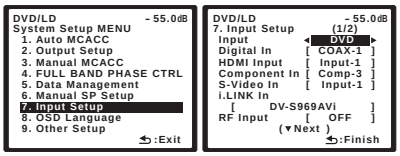
1 Switch on the amplifier and your TV.

Use the **AV AMPLIFIER**⏻ button to switch on.

2 Set the operation selector switch to AMP, then press the SETUP button.

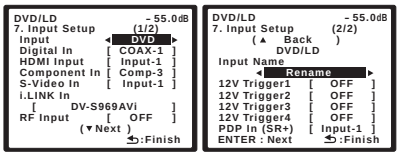
An on-screen display (OSD) appears on your TV. Use the ⬆/⬇/⬅/➡ buttons and **ENTER** to navigate through the screens and select menu items. Press **RETURN** to confirm and exit the current menu.

3 Select 'Input Setup' from the System Setup menu.



4 Select the input function that you want to set up.

The default names correspond with the names next to the terminals on the rear panel (such as **DVD/LD** or **VIDEO/GAME 1**) which, in turn, correspond with the names on the remote control.



5 Select the input(s) to which you've connected your component.

For example, if your DVD player only has an optical output, you will need to change the **DVD/LD** input function's **Digital In** setting from **COAX 1** (default) to the optical input you've connected it to.The numbering (**OPT1** to **6**) corresponds with the numbers beside the inputs on the back of the amplifier.

- If you change the setting to an input that has been previously assigned to another function (for example, **TV**), then the setting for that function will automatically be switched off.
- If your component is connected via a component video cable to an input terminal other than the default, you must tell the amplifier which input terminal your component is connected to, or else you may see the S-Video or composite video signals instead of the component video signals.[1]
- If you have more than one i.LINK component connected, you can assign each one to a different input function in the same way (to check your settings after doing so, see *Checking the i.LINK inputs* on page 59).[2]

6 When you're finished, select 'Next' to continue to the next screen.

The second screen of the Input setup has three optional settings:

- **Input Name** – You can choose to rename the input function for easier identification. Select **Rename** to do so, or **Default** to return to the system default.
- **12V Trigger 1** to **4** – After connecting a component to one of the 12 volt triggers (see *Switching components on and off using the 12 volt trigger* on page 67), select **MAIN**, **ZONE 2**, **ZONE 3** or **OFF** for the corresponding trigger setting to switch it on automatically along with the (main or sub) zone specified.

Note

1 For high-definition video (using component video connections), or when digital video conversion is switched off (in *Setting the Video options* on page 101), you must connect your TV to this amplifier using the same type of video cable as you used to connect your video component.

2 • If you assign i.LINK-equipped components to an input (for example **DVD/LD**), you will be able to select both audio and video signals from i.LINK-equipped components using the corresponding input source button (or the **INPUT SELECT** button / **INPUT SELECTOR** dial). Assigning i.LINK sources also allows you to keeps the sound settings you've made for other input functions.

• An i.LINK-equipped video component should be assigned to the input function to which you have connected the video signal from the component.

• If you assign an i.LINK input to a certain function (for example **DVD/LD**), then any digital inputs previously assigned to that function will automatically be set to **i.LINK** (not assigned).

- **PDP In (SR+)** – To control certain functions on this amplifier from a plasma television, select the display input to which you've connected the amplifier.[1]

7 When you're finished, press RETURN.
You will return to the System Setup menu.

Input function default and possible settings

The terminals on the rear of the amplifier generally correspond to the name of one of the input source functions. If you have connected components to this amplifier differently from (or in addition to) the defaults below, see *The Input Setup menu* on page 94 to tell the amplifier how you've connected up. The dots (●) indicate possible assignments.

Input source	Input Terminals				
	Digital	i.LINK	HDMI	Component	S-Video
DVD/LD	COAX 1	●	●[a]	IN 1	IN 1
BD	COAX 2	●	●[a]	IN 2	●
TV	OPT 1	●	●[a]	●	●
SAT	OPT 2	●	●[a]	●	●
DVR/VCR 1	OPT 3	●	●[a]	IN 4	*(Fixed)*
DVR/VCR 2	OPT 4	●	●[a]	IN 5	*(Fixed)*
VIDEO/ GAME 1	OPT 5	●	●[a]	IN 3	●
VIDEO/ GAME 2	*(Fixed)*		●[a]		*(Fixed)*
HDMI 1			(**HDMI-1**)		
HDMI 2			(**HDMI-2**)		
HDMI 3			(**HDMI-3**)		
HDMI 4			(**HDMI-4**)		
HDMI 5			(**HDMI-5**)		
HDMI 6			(**HDMI-6**)		
MULTI CH IN			●[a]		
HOME MEDIA GALLERY					
CD	COAX 3	●			
CD-R/ TAPE/MD	OPT 6	●			
SACD	COAX 4	●			
TUNER					
PHONO					
iPod					

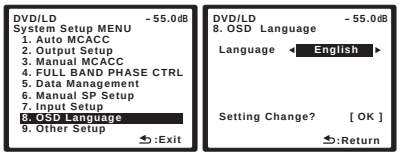
a. With HDMI Control set to ON, assignments cannot be made (see *HDMI Control* on page 91).

Changing the OSD display language (OSD Language)

The language used on the on-screen display can be changed.

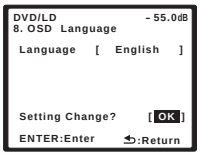
1 Set the operation selector switch to AMP, then press the SETUP button.
An on-screen display (OSD) appears on your TV. Use the ⬆/⬇/⬅/➡ buttons and **ENTER** to navigate through the screens and select menu items. Press **RETURN** to confirm and exit the current menu.

2 Select 'OSD Language' from the System Setup menu.



3 Select the desired language.[2]
- **English (default)**
- **French**
- **German**
- **Spanish**
- **Russian**
- **Chinese**

4 Select 'OK' to change the language.

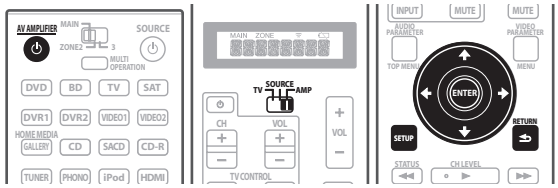


5 When you're finished, press RETURN.
You will return to the System Setup menu.

Note
1 You will have to make an SR+ cable connection from a **CONTROL OUT** jack on the display to the **CONTROL IN** jack on this amplifier (opposite from the setup in *Using this amplifier with a Pioneer plasma television* on page 68). Note that to control this amplifier using the remote, you will have to point it at the plasma television's remote sensor after making this connection.
2 When **German**, **Russian** or **Chinese** is selected, the HOME MEDIA GALLERY input OSD screen is in English.

The Other Setup menu

The Other Setup menu is where you can make customized settings to reflect how you are using the amplifier.



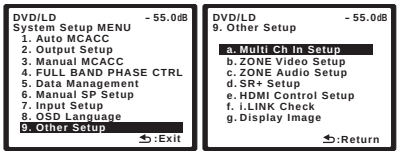
1 Switch on the amplifier and your TV.

Use the **AV AMPLIFIER**⏻ button to switch on.

2 Set the operation selector switch to AMP, then press the SETUP button.

An on-screen display (OSD) appears on your TV. Use the ⬆/⬇/⬅/➡ buttons and **ENTER** to navigate through the screens and select menu items. Press **RETURN** to confirm and exit the current menu.

3 Select 'Other Setup', then press ENTER.



4 Select the setting you want to adjust.

If you are doing this for the first time, you may want to adjust these settings in order:

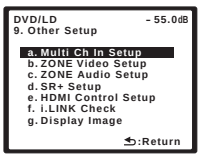
- **Multi Ch In Setup** – Specifies the optional settings for a multi-channel input.
- **ZONE Video Setup** – Set the MULTI-ZONE video conversion function (see *ZONE Video Setup* below).
- **ZONE Audio Setup** – Specify your volume setting for a MULTI-ZONE setup (see *ZONE Audio Setup* on page 97).
- **SR+ Setup** – Specify how you want to control your Pioneer plasma television (see *SR+ Setup for Pioneer plasma televisions* on page 97).
- **HDMI Control Setup** – Synchronizes this amplifier with your Pioneer component supporting HDMI Control (see *Setting the HDMI Control mode* on page 92).
- **i.LINK Check** – Check which i.LINK-equipped components you have connected, and which input function they are assigned to (see *Checking the i.LINK inputs* on page 59).
- **Display Image** – Select the OSD display's background pattern (see *Select the OSD display's background pattern (Display Image)* on page 98).

5 Make the adjustments necessary for each setting, pressing RETURN to confirm after each screen.

Multi Channel Input Setup

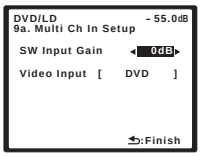
You can adjust the level of the subwoofer for a multi-channel input. Also, when the multi-channel input is selected as an input source, you can display the video images of other input sources. In the Multi Channel Input Setup, you can assign a video input to the multi-channel input.

1 Select 'Multi Ch In Setup' from the Other Setup menu.



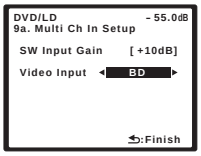
2 Select the 'SW Input Gain' setting you want.

- **0dB** – Outputs sound of the subwoofer at the level originally recorded on the source.
- **+10dB** – Outputs sound of the subwoofer at the level increased by 10 dB.



3 Select the 'Video Input' setting you want.

When the multi-channel input is selected as an input source, you can display the video images of other input sources. The video input can be selected from the following: **DVD/LD**, **BD**, **TV**, **SAT**, **DVR/VCR 1**, **DVR/VCR 2**, **VIDEO/GAME 1**, **VIDEO/GAME 2**, **OFF**.

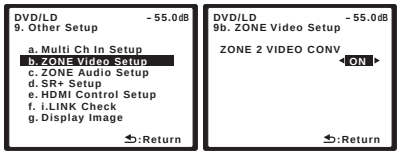


4 When you're finished, press RETURN.

You will return to the Other Setup menu.

ZONE Video Setup

1 Select 'ZONE Video Setup' from the Other Setup menu.



2 Select whether to set 'ZONE 2 VIDEO CONV.' to ON or OFF.

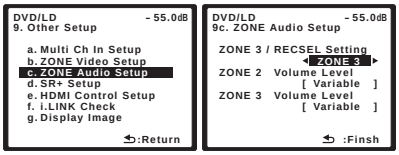
- **ON** – The composite video or S-Video input signals are converted with respect to COMPONENT VIDEO ZONE2 OUT or VIDEO ZONE2 OUT.[1] This way, video signals can be output even if the input device and the ZONE2 TV monitor are connected with different types of cables.
- **OFF** – The ZONE2 video output is not converted. In this case, connect the input device and ZONE2 TV monitor with the same type of cable (composite or component).

3 When you're finished, press RETURN.
You will return to the Other Setup menu.

ZONE Audio Setup

If you've made MULTI-ZONE connections (see *MULTI-ZONE listening* on page 64), you may need to specify your volume setting.

1 Select 'ZONE Audio Setup' from the Other Setup menu.



2 Select the 'ZONE 3 / RECSEL Setting' you want.
You can select the **ZONE 3** or **RECSEL** setting.

- **ZONE 3** – Sound is output from **AUDIO ZONE3 OUT** jack.
- **RECSEL** – Sound is output from the **CD-R/TAPE/MD OUT**, **DVR/VCR 1 OUT** or **DVR/VCR 2 OUT** jack. For details, see *Playing a different source when recording* on page 102.

3 Select the volume level setting of ZONE 2 and ZONE 3.[2]

- **Variable** – Use this setting if you've connected a power amplifier in the sub room (this amplifier is simply being used as a pre-amp) and you will be using this amplifier's controls to adjust the volume.
- **Fixed** – Use this setting if you've connected a fully integrated amplifier (such as another Pioneer VSX amplifier) in the sub room and want to use that amplifier's volume controls.

With the **Fixed** setting, the source is sent from this amplifier at maximum volume, so make sure the volume is quite low in the sub zone at first, and then experiment to find the correct level.

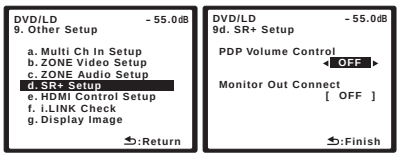
4 When you're finished, press RETURN.
You will return to the Other Setup menu.

SR+ Setup for Pioneer plasma televisions

Make the following settings if you have connected a Pioneer plasma television to this amplifier using an SR+ cable. Note that the number of function settings available will depend on the plasma television you've connected.

See also *Using this amplifier with a Pioneer plasma television* on page 68 and *Using the SR+ mode with a Pioneer plasma television* on page 69.

1 Select 'SR+ Setup' from the Other Setup menu.

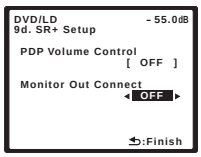


2 Select the 'PDP Volume Control' setting you want.

- **OFF** – The amplifier does not control the volume of the plasma television.
- **ON** – When the amplifier is switched to one of the inputs that use the plasma television (**DVD/LD**, for example), the volume on the plasma television is muted so only sound from the amplifier is heard.

3 Assign any input source connected to the plasma television to the corresponding input number.
This matches the amplifier's input source with a numbered video input on the plasma television. For example, assign **DVD/LD** to input-2 if you have connected the your DVD video output to video input 2 on the plasma television.

- The **Monitor Out Connect** should be set to the input that you've used to connect this amplifier to your plasma television.



4 When you're finished, press RETURN.
You will return to the Other Setup menu.

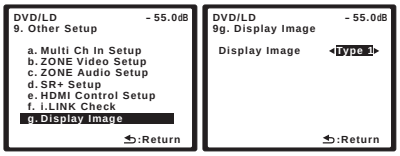
Note

1 The component video input signal is only output from COMPONENT VIDEO ZONE2 OUT.
2 If you selected **7.2ch+ZONE 2** in the *Speaker output setting* on page 43, you won't be able to change the volume level.

Select the OSD display's background pattern (Display Image)

The OSD display's background color can be selected.
One of the two patterns below can be selected.

1 Select 'Display Image' from the Other Setup menu.
The OSD background color selection mode is set.



2 Use ⬅/➡ to select the background color pattern type.
The type switches between **Type 1** and **Type 2**.

- **Type 1**: Blue background color.
- **Type 2**: Black background color.

3 When you're finished, press RETURN.
You will return to the Other Setup menu.

Chapter 11:
Using other functions

Setting the Audio options

There are a number of additional sound settings you can make using the **AUDIO PARAMETER** menu. The defaults, if not stated, are listed in bold.

Important

- Note that if a setting doesn't appear in the **AUDIO PARAMETER** menu, it is unavailable due to the current source, settings and status of the amplifier.

1 Press AUDIO PARAMETER.

2 Use ↑/↓ to select the setting you want to adjust.

Depending on the current status/mode of the amplifier, certain options may not be able to be selected. Check the table below for notes on this.

3 Use ←/→ to set it as necessary.

See the table below for the options available for each setting.

4 Press RETURN to confirm and exit the menu.

Setting	What it does	Option(s)
MCACC (MCACC preset)	Selects your favorite MCACC preset memory when multiple preset memories are saved. When a MCACC preset memory has been renamed, the name given is displayed.	*M1. MEMORY 1* to *M6. MEMORY 6* Default: **M1. MEMORY 1** *MCACC OFF*[a]
EQ (Acoustic Calibration EQ)	Switches on/off the effects of EQ Pro. only for the MCACC preset memory selected. This setting is available for each MCACC preset memory.	**ON** *OFF*[b]
STAND.WAVE (Standing Wave)	Switches on/off the effects of Standing Wave Control only for the MCACC preset memory selected. This setting is available for each MCACC preset memory.	**ON** *OFF*
SOUND DELAY	Some monitors have a slight delay when showing video, so the soundtrack will be slightly out of sync with the picture. By adding a bit of delay, you can adjust the sound to match the presentation of the video.	0.0 to 6.0 (frames) *1 second = 25 frames (PAL)* Default: **0.0**
MIDNIGHT	Allows you to hear effective surround sound of movies at low volumes.	**MID/LOUD OFF** *MIDNIGHT ON*
LOUDNESS	Used to get good bass and treble from music sources at low volumes.	*LOUDNESS ON*

Setting	What it does	Option(s)
TONE (Tone Control)	Applies the treble and bass tone controls to a source, or bypasses them completely.	**BYPASS** *ON*
BASS[c]	Adjusts the amount of bass.	–6 to +6 (dB) Default: **0** (dB)
TREBLE[c]	Adjusts the amount of treble.	–6 to +6 (dB) Default: **0** (dB)
S.RETRIEVER (Sound Retriever)	When audio data is removed during the WMA/MP3/MPEG-4 AAC compression process, sound quality often suffers from an uneven sound image. The Sound Retriever feature employs new DSP technology that helps bring CD quality sound back to compressed 2-channel audio by restoring sound pressure and smoothing jagged artifacts left over after compression.	**OFF** *ON*
DNR (Digital Noise Reduction)	May improve the quality of sound in a noisy source (for example, cassette or video tape with lots of background noise) when switched on.	**OFF** *ON*
DIALOG E (Dialog Enhancement)	Localizes dialog in the center channel to make it stand out from other background sounds in a TV or movie soundtrack.	**OFF** *ON*
SRC (Sampling Rate Conversion)	Creates a wider dynamic range with digital sources like CDs or DVDs.	**ON** *OFF*
DUAL MONO	Specifies how dual mono encoded Dolby Digital soundtracks should be played. Dual mono is not widely used, but is sometimes necessary when two languages need to be sent to separate channels.	**CH1** – Channel 1 is heard only *CH2* – Channel 2 is heard only *CH1 CH2* – Both channels heard from front speakers
DRC (Dynamic Range Control)	Adjusts the level of dynamic range for movie soundtracks optimized for Dolby Digital, DTS, Dolby Digital Plus, Dolby TrueHD, DTS-HD and DTS-HD Master Audio (you may need to use this feature when listening to surround sound at low volumes).	**AUTO**[d] *MAX* *MID* *OFF*

Setting	What it does	Option(s)
LFE (LFE Attenuate)	Some Dolby Digital and DTS audio sources include ultra-low bass tones. Set the LFE attenuator as necessary to prevent the ultra-low bass tones from distorting the sound from the speakers. The LFE is not limited when set to 0 dB, which is the recommended value. When set to –5 dB, –10 dB, –15 dB or –20 dB, the LFE is limited by the respective degree. When OFF is selected, no sound is output from the LFE channel.	**0dB** *–5dB/ –10dB/ –15dB/ –20dB/ OFF*
Surr B DELAY[e] (Adjusting the surround B speaker delay)	When the surround speaker is set to the array mode, delay processing is applied to the surround B channel. This delay can be adjusted to achieve a sound field with a more natural surround sound. For details, see *Adjusting the surround B speaker delay (Surr B DELAY)* on page 101.	0 msec to 20 msec Default: **0 msec**
SACD GAIN[f]	Brings out detail in SACDs by maximizing the dynamic range (during digital processing).	**0dB** *+6 dB*
HDMI AUDIO (HDMI Audio)	Specifies the routing of the HDMI audio signal out of this amplifier (*amp*) or *through* to a TV or plasma television. When THROUGH is selected, no sound is output from this amplifier.	**AMP** *THROUGH*
AUTO DELAY (Auto delay)	This feature automatically corrects the audio-to-video delay between components connected with an HDMI cable. The audio delay time is set depending on the operational status of the display connected with an HDMI cable. The video delay time is automatically adjusted according to the audio delay time.[g]	**OFF** *ON*
CENTER WIDTH[h] (Center Width) (Applicable only when using a center speaker)	Provides a better blend of the front speakers by spreading the center channel between the front right and left speakers, making it sound wider (higher settings) or narrower (lower settings).	0 to 7 Default: **3**
DIMENSION[h]	Adjusts the depth of the surround sound balance from front to back, making the sound more distant (minus settings), or more forward (positive settings).	–3 to +3 Default: **0**
PANORAMA[h]	Extends the front stereo image to include the surround speakers for a 'wraparound' effect.	**OFF** *ON*
CENTER IMAGE[i] (Center Image) (Applicable only when using a center speaker)	Adjusts the center image to create a wider stereo effect with vocals. Adjust the effect from **0** (all center channel sent to front right and left speakers) to **10** (center channel sent to the center speaker only).	0 to 10 Defaults: Neo:6 MUSIC: **3** Neo:6CINEMA: **10**
EFFECT	Sets the effect level for the currently selected Advanced Surround mode (each mode can be set separately).	10 to 90

a. When **MCACC OFF** is selected, all MCACC preset memories become deactivated.
b. When **EQ OFF** is selected, the MCACC indicator does not light even when a MCACC preset memory is selected.
c. The adjustment can be made only when **TONE** is set to **ON**.
d. The initially set **AUTO** is only available for Dolby TrueHD signals. Select **MAX** or **MID** for signals other than Dolby TrueHD.
e. In the cases described below, **Surr B DELAY** cannot be selected (and the effect is turned off even if a value is set).
– When the Output Setup is set to anything other than **Normal**
– When surround B (**Surr. B**) is set to **NO** at the speaker settings
– When the speaker system A/B is set to anything other than **A+B ON**
– When using headphones
– When in the pure direct mode
– When the audio adjustment function's HDMI audio output is set to **THROUGH**
f. You shouldn't have any problems using this with most SACD discs, but if the sound distorts, it is best to switch the gain setting back to **0** dB.
g. This feature is only available when the connected display supports the automatic audio/video synchronizing capability ('lip-sync') for HDMI. If you find the automatically set delay time unsuitable, set **AUTO DELAY** to **OFF** and adjust the delay time manually. For more details about the lip-sync feature of your display, contact the manufacturer directly.
h. Only when listening to 2-channel sources in Dolby Pro Logic IIx Music/ Dolby Pro Logic II Music mode.
i. Only when listening to 2-channel sources in Neo:6 MUSIC/CINEMA mode.

Adjusting the surround B speaker delay (Surr B DELAY)

The listening area can be expanded by setting the surround B speaker to the array mode. This results in a sound field with good front/rear and left/right sound connectivity. Depending on the position of the speakers and the listening position, however, in some cases adding a delay to the speakers set to the array mode can result in a more natural surround effect. In such cases, it is possible to set the surround B channel to the array mode using the "Surr B DELAY" audio adjustment function, add delay processing to the surround B channel and fine-adjust. The delay can be set between 0 and 20 ms with a high precision of 1 ms. Adjust the delay value while playing movies or music and set it to the desired position to achieve a more natural surround sound.[1]

Setting the Video options

There are a number of additional picture settings you can make using the **VIDEO PARAMETER** menu. The defaults, if not stated, are listed in bold.

Important

- Note that if an option cannot be selected on the **VIDEO PARAMETER** menu, it is unavailable due to the current source, setting and status of the amplifier.

1 Press VIDEO PARAMETER.

2 Use ↑/↓ to select the setting you want to adjust.[2]

Depending on the current status/mode of the amplifier, certain options may not be able to be selected. Check the table below for notes on this.

3 Use ←/→ to set it as necessary.

See the table below for the options available for each setting.[3]

4 Press RETURN to confirm and exit the menu.

Setting	What it does	Option(s)
VIDEO CONV. (Digital Video Conversion)	Converts video signals for output from the **MONITOR OUT** jacks for all video types.	**ON** *OFF*
BRIGHTNESS	Adjusts the overall brightness.	–10 to +10 Default: **0**
CONTRAST	Adjusts the contrast between light and dark.	–10 to +10 Default: **0**
HUE	Adjusts the red/green balance.	–10 to +10 Default: **0**
CHROMA LEVEL	Adjusts saturation from dull to bright.	–10 to +10 Default: **0**
NR	Setting for reducing roughness of the picture.	**0** *–10 / –5 / +5 / +10*
RESOLUTION[a]	Specifies the output resolution of the video signal (when analog video input signals are output at the HDMI OUT connector and/or component video out terminal, select this according to the resolution of your monitor and the images you wish to watch). When **AUTO** is selected, the resolution is automatically selected depending on the capability of the display connected to this amplifier.	**AUTO** *PURE* *480i/576i* *480p/576p* *720p* *1080i* *1080p*
ASPECT	Specifies the aspect ratio when analog video input signals are output from all of the MONITOR OUT terminals. Make your desired settings while checking each setting on your display (if the image doesn't match your monitor type, cropping or black bands appear).	**THROUGH** *(none)* *NORMAL* *ZOOM*

a. • When set to a resolution with which the TV (monitor) is not compatible, no picture is output. Also, in some cases no picture will be output due to copyright protection signals. In this case, change the setting.
• When **AUTO** is selected, the resolution is selected automatically according to the capacity of the TV (monitor) connected by HDMI. When **PURE** is selected, the signals are output with the same resolution as when input. (At this time, video signals are only output from the same type of terminals to which they were input.)
• This setting is valid for HDMI and component outputs.

Note

1 In the cases described below, **Surr B DELAY** cannot be selected (and the effect is turned off even if a value is set).
– When the Output Setup is set to anything other than **Normal**
– When surround B (**Surr B**) is set to **NO** at the speaker settings
– When the speaker system A/B is set to anything other than **A+B ON** or **OFF**
– When using headphones
– When in the pure direct mode
– When the audio adjustment function's HDMI audio output is set to **THROUGH**

2 Adjustments can be performed while watching the actual screen by pressing **ENTER** after selecting the setting item. (This may not be possible for some video signals.)

3 • All of the setting items can be set for each input source.
• Setting items other than **VIDEO CONV.** can only be selected when **VIDEO CONV.** is set to **ON**.

Making an audio or a video recording

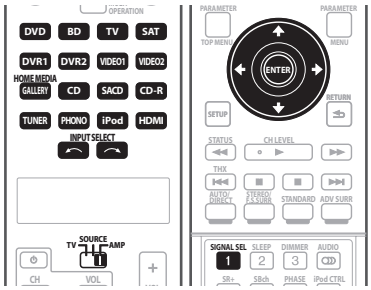
You can make an audio or a video recording from an audio or video source connected to the amplifier (such as a CD player or TV).[1]

To use this feature, you must set **ZONE 3 / RECSEL Setting** to **RECSEL** and **MULTI-ZONE CONTROL** to **RECOUT SOURCE** in the **ZONE Audio Setup**. For details, see *ZONE Audio Setup* on page 97.

Keep in mind you can't make a digital recording from an analog source or vice-versa, so make sure the components you are recording to/from are hooked up in the same way (see *Connecting your equipment* on page 16 for more on connections).

Since the video converter is not available when making recordings (from the video **OUT** jacks) make sure to use the same type of video cable for connecting your recorder as you used to connect your video source (the one you want to record) to this amplifier. For example, you must connect your recorder using S-Video if your source has also been connected using S-Video.

For more information about video connections, see *Connecting a DVD/HDD recorder, VCR and other video sources* on page 23.



1 Select the source you want to record.

Use the input source buttons (or **INPUT SELECT**).

- If necessary, set the operation selector switch to **AMP**, then press **SIGNAL SEL** to select the input signal corresponding to the source component (see *Choosing the input signal* on page 37 for more on this).

2 Prepare the source you want to record.

Tune to the radio station, load the CD, video, DVD etc.

3 Prepare the recorder.

Insert a blank tape, MD, video etc. into the recording device and set the recording levels.

Refer to the instructions that came with the recorder if you are unsure how to do this. Most video recorders set the audio recording level automatically—check the component's instruction manual if you're unsure.

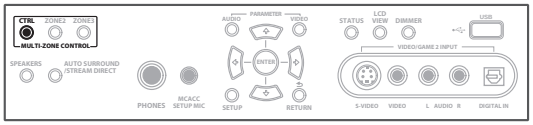
4 Start recording, then start playback of the source component.

Tip

- If you have a digital recorder connected to the **ZONE3/SOURCE OUT** digital output and **ZONE 3** is switched on (see *Using the MULTI-ZONE controls* on page 66), you can also select a different input source for this output while **ZONE 3** shows in the display.

Playing a different source when recording

Using this amplifier, it's possible to listen to a different analog source than the one you're recording.



1 During recording, press the REC SELECT CONTROL button on the front panel until RECOUT shows in the display.[2]

2 While RECOUT shows in the display, use the INPUT SELECTOR dial to select the source you want to record.

The default, **RECOUT SOURCE**, records the source you're currently listening to (as in *Making an audio or a video recording* on page 102).

- Note that the setting you make here is stored in memory, even if you switch off the amplifier, so if you want to record a different input source later, you must do so with **REC SELECT**, or by selecting **RECOUT SOURCE**.

3 After RECOUT disappears from the display, select the input source you want to listen to.

This will be heard from the main system without affecting your recording.[3]

Note

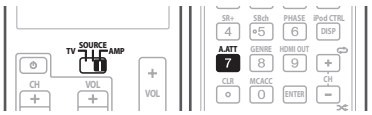
1 • The amplifier's volume, Audio parameters (the tone controls, for example), and surround effects have no effect on the recorded signal.
• Some digital sources are copy-protected, and can only be recorded in analog.
• Some video sources are copy-protected. These cannot be recorded.

2 If **RECOUT** does not appear in the display, you may have to switch **ZONE 2** off by pressing **MULTI-ZONE CONTROL ZONE 2** and selecting either **ZONE 3** or off. See *Using the MULTI-ZONE controls* on page 66 for more on this.

3 If **RECOUT SOURCE** is selected, changing the input source likewise changes the input source used for your recording.

Reducing the level of an analog signal

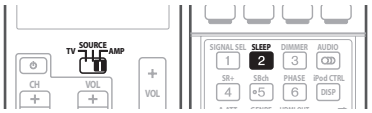
The input attenuator lowers the input level of an analog signal when it's too strong. You can use this if **ANALOG INPUT OVER** is displayed on the LCD or if you can hear distortion in the sound.[1]



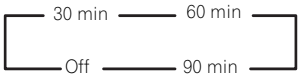
- **Set the operation selector switch to AMP, then press A.ATT to switch the input attenuator on or off.**

Using the sleep timer

The sleep timer switches the amplifier into standby after a specified amount of time so you can fall asleep without worrying about the amplifier being left on all night. Use the remote control to set the sleep timer.



- **Set the operation selector switch to AMP, then press SLEEP repeatedly to set the sleep time.**

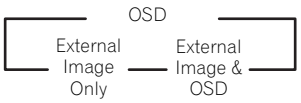


- You can check the remaining sleep time at any time by pressing **SLEEP** once. Pressing repeatedly will cycle through the sleep options again.[2]

Switching the contents displayed on the LCD

One of three patterns of information to be displayed on the LCD can be selected. By default this is set to 'OSD'.

- **Press LCD VIEW on the front panel to change the pattern of information.[3]**

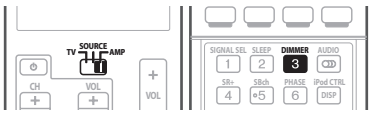


This can be set separately for different inputs. Note, however, that only inputs with a video terminal (DVD/LD, BD, TV, SAT, DVR/VCR1, DVR/VCR2, VIDEO/GAME1 and VIDEO/GAME2), inputs from an iPod on which video is playing and inputs from MULTI CH IN for which VIDEO INPUT is set to something other than **OFF** can be set.

With HDMI inputs, it is not possible to display external images on the LCD screen. To do so, connect to this amplifier's video input using an analog video cable.

Dimming the display

You can choose between four brightness levels for the front LCD display. Note that when selecting sources, the display automatically brightens for a few seconds.



- **Set the operation selector switch to AMP, then press DIMMER repeatedly to change the brightness of the front LCD display.**

Switching the HDMI output

Set which terminal to use when outputting video and audio signals from the HDMI output terminals (HDMI OUT1 or HDMI OUT2).

The HDMI OUT1 terminal is compatible with the HDMI control function.

- **Set the operation selector switch to AMP, then press HDMI OUT.**

Please wait a while when **Please wait ...** is displayed. No operations other than switching the power between standby or on can be performed at this time.

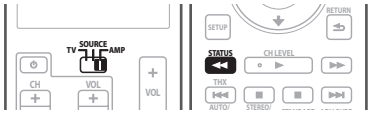
The output switches between HDMI OUT1 and HDMI OUT2 each time the button is pressed.[4]

Note

1 The attenuator isn't available with digital sources, or when using the Stream Direct modes.
2 You can also switch off the sleep timer simply by switching off the amplifier.
3 Depending on the settings of the video adjustment function (page 101), the external image may not appear on the LCD.
4 • *Synchronized amp mode* on page 92 is canceled when the HDMI output is switched. If you wish to use the synchronized amp mode, switch to HDMI OUT1, then select the synchronized amp mode using the plasma television's remote control.
• When the power is turned off then back on after switching the HDMI output, the input is set to a setting between HDMI1 and HDMI6.

Checking the settings of the sound currently playing, etc.

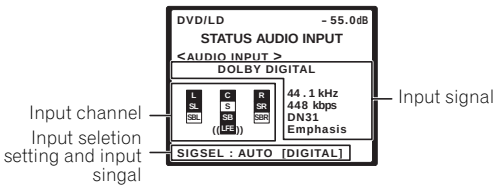
The audio input/output information, the video input/output information, the MULTI-ZONE status and this amplifier's setting information can be checked by pressing the status check button on the remote control unit. The different sets of information are divided between four screens and displayed on the amplifier's LCD. The information shown below can be checked for the different inputs.



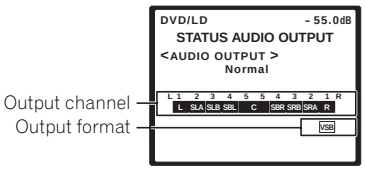
1 Set the operation selector switch to AMP, then press STATUS to check the system settings.

These appear on the front LCD display. The screen switches between the five screens below each time the button is pressed.

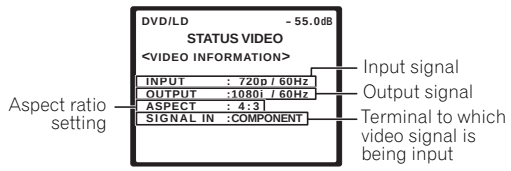
- **Audio input information**



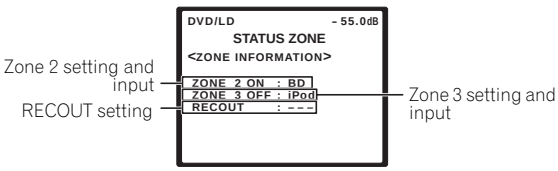
- **Audio output information**



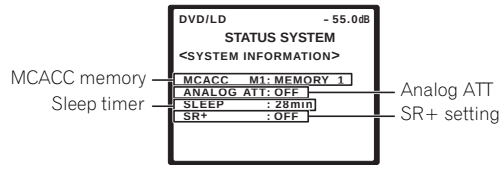
- **Video input/output information**



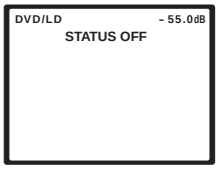
- **MULTI-ZONE status**



- **This amplifier's settings information**



- **OFF**



2 When you're finished, press STATUS again to switch off the display.

Resetting the system

Use this procedure to reset all the amplifier's settings to the factory default. Use the front panel controls to do this.

1 Switch the amplifier into standby.

2 While holding down the SETUP button on the front panel, press ⏻ STANDBY/ON.

The display shows **RESET NO**.

3 Press the ENTER button on the front panel.

4 Select RESET using ⬅/➡, then press the ENTER button on the front panel.

The display shows **RESET? OK**.

5 Press ENTER to confirm.

OK appears in the display to indicate that the amplifier has been reset to the factory default settings.

- Note that all settings will be saved, even if the amplifier is unplugged.

Default system settings

Setting		Default
HDMI Audio		Amp
Digital Video Conversion		On
Speakers		SP: A+B ON
Output Setup		Normal
Speaker System	Front	SMALL
	Center	SMALL
	Surr.A	SMALL
	Surr.B	SMALL
	SB	SMALLx2
	SW	YESx2
Crossover		80 Hz
X-Curve		OFF
THX Audio Setting		0–0.3m
LCD VIEW		OSD
DIMMER		brightest
Inputs		
See *Input function default and possible settings* on page 95.		
MULTI-ZONE		
Zone 2 Volume Level		Variable
Zone 2/3 Volume		–60
HDMI		
HDMI output		HDMI OUT1
HDMI Control		ON
SR+		
SR+ Control On/Off		OFF
SR+ Volume Control On/Off		OFF
Monitor Out		OFF
DSP		
MCACC Position Memory		M1: MEMORY 1
Surround back channel Processing		ON
Phase Control		ON
Full Band Phase Control		OFF
Sound Retriever		OFF
Sound Delay		0 frame
Dual Mono		CH1
DRC		AUTO
SACD Gain		0 dB
Surr B Delay		0 msec
LFE Attenuate		0 dB
Auto delay		OFF
Digital Safety		OFF
Effect Level	ExtendedStereo	90
	Other modes	50

Setting		Default
DD PL II Music Options	Center Width	3
	Dimension	0
	Panorama	OFF
Neo:6 Options	Center Image	Neo:6 MUSIC: 3 Neo:6 CINEMA: 10
All Inputs	Listening Mode (2 ch)	AUTO SURROUND
	Listening Mode (x ch)	AUTO SURROUND
	Listening Mode (HP)	STEREO
See also *Setting the Audio options* on page 99 for other default DSP settings.		
MCACC		
Channel level (M1 to M6)		0 dB
Speaker Distance (M1 to M6)		3.00 m
Standing Wave (M1 to M6)	Standing Wave On/Off	ON
	ATT	0 dB
	SWch Wide Trim	0.0
EQ Data (M1 to M6)	All channels/bands	0 dB
EQ Wide Trim (M1 to M6)		0.0 dB

Chapter 12: Controlling the rest of your system

Setting the remote to control other components

Most components can be assigned to one of the input source buttons (such as **DVD** or **CD**) using the component's manufacturer preset code stored in the remote.

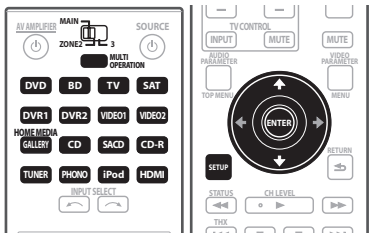
However, there are cases where only certain functions may be controllable after assigning the proper preset code, or the codes for the manufacturer in the remote control will not work for the model that you are using.

If you can't find a preset code that matches the component you want to control, you can still teach the remote individual commands from another remote control (see *Programming signals from other remote controls* below).

Note

- You can cancel or exit any of the steps by pressing **MULTI OPERATION**. To go back a step, press **RETURN**.
- After one minute of inactivity, the remote automatically exits the operation.

Selecting preset codes directly



1 While pressing the MULTI OPERATION button, press SETUP.
The remote LCD display shows **SETUP**.

2 Use ↑/↓ to select PRESET, then press ENTER.

3 Press the input source button for the component you want to control, then press ENTER.
The LCD on the remote displays the component you want to control (for example **DVD** or **TV**).[1]

4 Use ↑/↓ to select the first letter of the brand name of your component, then press ENTER.
This should be the manufacturer's name (for example, **P** for Pioneer).

5 Use ↑/↓ to select the manufacturer's name from the list, then press ENTER.

6 Use ↑/↓ to select the proper code from the list, then try using this remote with your component.
The code should start with the component type (for example, **DVD 020**). If there is more than one, start with the first one.[2]

To try out the remote control, switch the component on or off (into standby) by pressing **SOURCE**⏻. If it doesn't seem to work, select the next code from the list (if there is one).

- If you can't find or properly enter a preset code, you can still teach the remote individual commands from another remote control (see *Programming signals from other remote controls* below).

7 If your component is controlled successfully, press ENTER to confirm.
The remote LCD display shows **OK**.

Programming signals from other remote controls

If the preset code for your component is not available, or the available preset codes do not operate correctly, you can program signals from the remote control of another component. This can also be used to program additional operations (buttons not covered in the presets) after assigning a preset code.[3]

1 While pressing the MULTI OPERATION button, press SETUP.
The remote LCD display shows **SETUP**.

2 Use ↑/↓ to select LEARNING, then press ENTER.
The LCD on the remote prompts you for the component you want to control (for example **DVD** or **TV**).

Note

1 You can't assign the **TUNER**, **iPod** or **HOME MEDIA GALLERY** buttons.
2 • When using a Pioneer HDD recorder, please select **PIONEER DVR 487**, **488**, **489** or **493**.
• When using a Pioneer plasma television released prior to summer 2005, please select preset codes **637** or **660**.
3 The remote can store about 200 preset codes (this has been tested with codes of Pioneer format only).

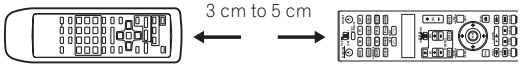
3 Press the input source button for the component you want to control, then press ENTER.

PRES KEY shows in the LCD display.[1]

4 Point the two remote controls towards each other, then press the button that will be doing the learning on this amplifier's remote control.

PRES KEY starts flashing to indicate the remote is ready to accept a signal.

- The remote controls should be 3 cm to 5 cm apart.

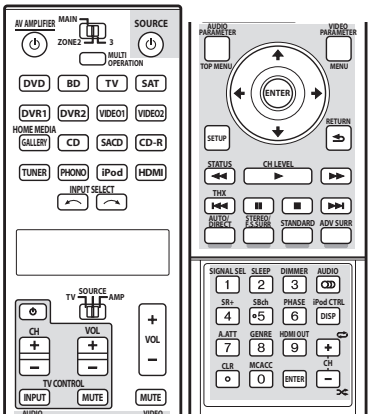


5 Press the corresponding button on the other remote control that is sending (teaching) the signal to this amplifier's remote control.

For example, if you want to learn the playback control signal, press and hold ► briefly. The LCD display will show **OK** if the operation has been learned.[2]

If for some reasons the operation hasn't been learned the LCD will display **ERROR** briefly, and then display **PRES KEY** again. If this happens, keep pressing the (teaching) button as you vary the distance between the two remotes, until the LCD display shows **OK**.[3]

Certain buttons represent operations that cannot be learned from other remote controls. The buttons available are shown below:



6 To program additional signals for the current component repeat steps 4 and 5.

To program signals for another component, exit and repeat steps 1 through 5.

7 Press and hold the MULTI OPERATION button for a couple of seconds to exit and store the operation(s).

Erasing one of the remote control button settings

This erases one of the buttons you have programmed and restores the button to the factory default.

1 While pressing the MULTI OPERATION button, press SETUP.

The remote LCD display shows **SETUP**.

2 Use ↑/↓ to select ERASE, then press ENTER.

The LCD on the remote prompts you for the component corresponding to the button setting to be erased.

3 Press the input source button corresponding to the command to be erased, then press ENTER.

The LCD display flashes **PRES KEY**.

4 Press and hold the button to be erased for two seconds.

The LCD display shows **OK** or **NO CODE** to confirm the button has been erased.

5 Repeat step 4 to erase other buttons.

6 Press and hold the MULTI OPERATION button for a couple of seconds when you're done.

Resetting the remote control presets

This will erase all preset remote control preset codes and programmed buttons.[4]

1 While pressing the MULTI OPERATION button, press SETUP.

The remote LCD display shows **SETUP**.

2 Use ↑/↓ to select RESET, then press ENTER.

RESET flashes in the LCD display.

3 Press and hold ENTER for about two seconds.

The LCD shows **OK** to confirm the remote presets have been erased.

Note

1 • You can't assign the **TUNER**, **iPod** or **HOME MEDIA GALLERY** buttons.
• The **TV CONTROL** buttons (**TV⏻**, **TV VOL +/–**, **TV CH +/–**, **MUTE** and **INPUT**) can only be learned after the operation selection switch is set to **TV**.

2 Note that interference from TVs or other devices will sometimes result in the remote control learning the wrong signal.

3 • Some commands from other remote controls cannot be learned, but in most cases the remotes just need to be moved closer together or farther apart.
• If the remote LCD shows **FULL**, it means the memory is full. See *Erasing one of the remote control button settings* above to erase a programmed button you're not using to free up more memory (note that some signals may take more memory than others).

4 When *Selecting preset codes directly* on page 106 are set, all the signals learned in the input source buttons are cleared. This function is convenient when you want to reset some but not all of input source buttons.

Confirming preset codes

Use this feature to check which preset code is assigned to an input source button.

1 While pressing the MULTI OPERATION button, press SETUP.
The remote LCD display shows **SETUP**.

2 Use ↑/↓ to select READ ID, then press ENTER.
The LCD on the remote prompts you for the input source button you want to check.

3 Press the button of the component for which you want to check the preset code, then press ENTER.
The brand name and preset code appears in the display for three seconds.

Renaming input source names

You can customize the names that appear on the remote LCD when you select an input source (for example, you could change the name of **DVR 1** to **HDD/DVR**).

1 While pressing the MULTI OPERATION button, press SETUP.
The remote LCD display shows **SETUP**.

2 Use ↑/↓ to select RENAME, then press ENTER.
The LCD on the remote prompts you for the button of the input source you want to rename.

3 Press the input source button you want to rename then press ENTER.

4 Use ↑/↓ to select NAME EDT, then press ENTER.
To reset the button to its original (default) name, select **NAME RST** above.

5 Edit the name of the input source in the remote control LCD, pressing ENTER when you're finished.
Use ↑/↓ to change the character and ←/→ to move forward/back a position. The name can be up to eight characters (the possible characters are listed below).

ABCDEFGHIJKLMNOPQRSTUVWXYZ

0123456789 \ / * + – [space]

Direct function

- Default setting: **ON**

You can use the direct function feature to control one component using the remote control while at the same time, using your amplifier to playback a different component. This could let you, for example, use the remote control to set up and listen to a CD on the amplifier, and then use the remote control to rewind a tape in your VCR while you continue to listen to your CD player.

When direct function is on, any component you select (using the input source buttons) will be selected by both the amplifier and the remote control. When you turn direct function off, you can operate the remote control without affecting the amplifier.

1 While pressing the MULTI OPERATION button, press SETUP.
The remote LCD display shows **SETUP**.

2 Use ↑/↓ to select DIRECT F, then press ENTER.
The LCD on the remote prompts you for the button of the input source you want to control.

3 Press the input source button for the component you want to control, then press ENTER.

4 Use ↑/↓ to switch direct function ON or OFF, then press ENTER.
The LCD shows **OK** to confirm the setting.

Multi Operation and System Off

The Multi Operation feature allows you to program a series of up to 5 commands for the components in your system. For example, you could turn on your TV, turn on your DVD player and start playing the loaded DVD using only two buttons on the remote control.

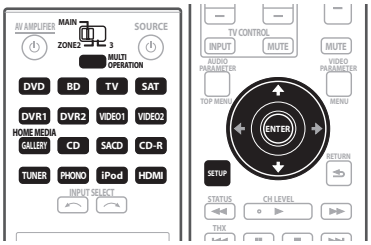
Similar to multi operations, System Off allows you to use one button to stop and switch off a series of components in your system at the same time.[1]

Note

1 • Before Multi Operation and System Off will work correctly, you must setup the remote to work with your TV and other components (see *Setting the remote to control other components* on page 106 for more on this).
• Some units may take some time to power up, in which case multiple operations may not be possible.
• Power on and off commands only work with components that have a standby mode.

Programming a multi-operation or a shutdown sequence

Set the remote control operation mode selector switch to **AMP** when you want to program this amplifier's operations, to **SOURCE** when you want to program operations of other components.



1 While pressing the MULTI OPERATION button, press SETUP.
The remote LCD display shows **SETUP**.

2 Use ↑/↓ to select MULTI OP or SYS OFF from the menu and press ENTER.
If you selected Multi Operation (**MULTI OP**), the LCD on the remote prompts you for an input source button.

If you selected System Off (**SYS OFF**), go to step 4.

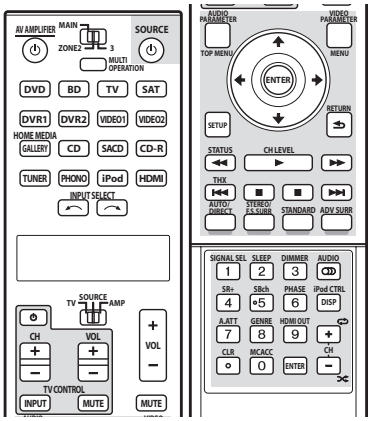
3 Press the input source button for the component that will start the multi-operation, then press ENTER.
For example, if you want to start the sequence by switching on your DVD player, press **DVD**.

4 Use ↑/↓ to select CODE EDT, then press ENTER.
To erase any previously stored multi-operations (or shutdown sequences) select **CODE ERS** above.

5 Use ↑/↓ to select a command in the sequence, then press ENTER.
If this is the first command in the sequence, select **1ST CODE**. Otherwise, simply choose the next command in the sequence. **PRES KEY** flashes after you press **ENTER**.

6 If necessary, press the input source button for the component whose command you want to input.
This is only necessary if the command is for a new component (input source).

7 Select the button for the command you want to input.
The following remote control commands can be selected:



- You don't need to program the amplifier to switch on or off. This is done automatically.

With Pioneer components, you don't need to:

- program the power to switch off in a shutdown sequence (except DVD recorders);
- program the power to switch on if it's the source component selected in step 3;
- program a Pioneer TV or monitor to switch on if the input function (selected in step 2) has video input terminals;

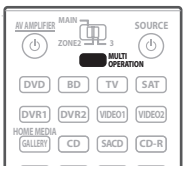
These take priority in multi operations (not shutdown).

8 Repeat steps 5 to 7 to program a sequence of up to five commands.

9 When you're finished, use ↑/↓ to select EXIT from the menu and press ENTER.
You will return to the remote control Setup menu. Select *** EXIT *** again to exit.

Using multi operations

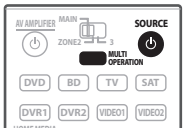
You can start multi operations with the amplifier switched on, or in standby.



1 Press MULTI OPERATION.
MULTI OP flashes in the display.

2 Press an input source button that has been set up with a multi operation.
The amplifier switches on (if it was in standby) and the programmed multi operation is performed automatically.

Using System off



1 Press MULTI OPERATION.
MULTI OP flashes in the display.

2 Press SOURCE⏻.
The command sequence you programmed will run, then all Pioneer components will switch off[1], followed by this amplifier.

Controls for TVs

This remote control can control components after entering the proper codes or teaching the amplifier the commands (see *Setting the remote to control other components* on page 106 for more on this). Set the operation selector switch to **SOURCE**, then press the other device operation button of the device you want to operate.

- The **TV CONTROL** buttons on the remote control are dedicated to control the TV assigned to the **TV** button.

Button(s)	Function	Components
TV⏻	Press to switch the component assigned to the **TV** button on or off.	Cable TV/Satellite TV/TV
INPUT	Switches the TV input. (Not possible with all models.)	Cable TV/Satellite TV/TV
TV CH +/–	Selects channels.	Cable TV/Satellite TV/TV
TV VOL +/–	Adjust the TV volume.	Cable TV/Satellite TV/TV
MUTE	Mute the volume.	Cable TV/Satellite TV/TV
SOURCE⏻	Switches the TV or CATV between standby and on.	Cable TV/Satellite TV/TV
◄◄	Use to choose the 'A' commands on a Satellite TV menu.	Satellite TV
I◄◄	Use to choose the RED/B commands on a Satellite TV/TV menu.	Satellite TV/TV
►►I	Use to choose the CYAN/E commands on a Satellite TV/TV menu.	Satellite TV/TV
II	Use to choose the GREEN/C commands on a Satellite TV/TV menu.	Satellite TV/TV
■	Use to choose the YELLOW/D commands on a Satellite TV/TV menu.	Satellite TV/TV
AUDIO	Use to switch audio tracks.	Satellite TV/TV
DISP	Use to display the channel information.	Cable TV/Satellite TV/TV
RETURN	Use to select **RETURN** or **EXIT**.	Satellite TV/TV
Number buttons	Use to select a specific TV channel.	Cable TV/Satellite TV/TV
+10 button	Use to add a decimal point when selecting a specific TV channel.	Satellite TV/TV
ENTER	Use to enter a channel.	Cable TV/Satellite TV/TV
MENU	Select the menu screen.	Cable TV/Satellite TV/TV
↑/↓/←/→ & ENTER	Press to select or adjust and navigate items on the menu screen.	Cable TV/Satellite TV/TV

Controls for other components

This remote control can control these components after entering the proper codes or teaching the amplifier the commands (see *Setting the remote to control other components* on page 106 for more on this). Set the operation selector switch to **SOURCE**, then press the other device operation button of the device you want to operate.

Button(s)	Function	Components
SOURCE⏻	Press to switch the component between standby and on.	CD/MD/CD-R/ DVD/LD/BD/DVR player/VCR/ Cassette deck
I◄◄	Press to return to the start of the current track or chapter. Repeated presses skips to the start of previous tracks or chapters.	CD/MD/CD-R/ DVD/LD/BD player
►►I	Press to advance to the start of the next track or chapter. Repeated presses skips to the start of following tracks or chapters.	CD/MD/CD-R/ DVD/LD/BD player
II	Pause playback or recording.	CD/MD/CD-R/ DVD/LD/BD/DVR player/VCR/ Cassette deck
►	Start playback.	CD/MD/CD-R/ DVD/LD/BD/DVR player/VCR/ Cassette deck
►►	Hold down for fast forward playback.	CD/MD/CD-R/ DVD/LD/BD/DVR player/VCR/ Cassette deck
◄◄	Hold down for fast reverse playback.	CD/MD/CD-R/ DVD/LD/BD/DVR player/VCR/ Cassette deck

Note
1 In order to avoid accidently switching off a DVD recorder that is currently recording, no DVD recorder power off codes are sent.

Button(s)	Function	Components
■	Stops playback.	CD/MD/CD-R/ DVD/LD/BD/DVR player/VCR/ Cassette deck
Number buttons	Directly access tracks on a program source.	CD/MD/CD-R/ LD/BD player/ VCR
	Use the number buttons to navigate the on-screen display.	DVD player
	Selects channels.	DVR/VCR
ENTER	Use as the **ENTER** button.	VCR/DVD/BD player
	Displays the setup screen for DVR players.	DVR player
	Changes sides of the LD.	LD player
TOP MENU	Displays the disc 'top' menu of a DVD player.	DVD/BD/DVR player
MENU	Displays menus concerning the current DVD or DVR you are using.	DVD/BD/DVR player
⬆	Pauses the tape.	Cassette deck
⬇	Stops the tape.	Cassette deck
ENTER	Starts playback.	Cassette deck
⬅/➡	Fast rewinds/fast forwards the tape.	Cassette deck
⬆/⬇/⬅/➡ & **ENTER**	Navigates DVD menu/options.	DVD/BD/DVR player
CH +/–	Selects channels.	VCR/DVD/DVR player
AUDIO	Changes the audio language or channel.	DVD/BD/DVR player
STANDARD	Switches to the VCR controls when using a VCR/DVD/HDD recorder.	VCR/DVD/DVR player
DISP	Press to display information.	DVD/BD/DVR player
AUTO/ DIRECT	Switches to the hard disk controls when using a DVD/HDD recorder.	DVR player
STEREO	Switches to the DVD controls when using a DVD/HDD recorder.	DVR player
SETUP	Displays the HOME MENU.	DVD/BD/DVR player
CLR	Use as the CLEAR button.	DVD/BD player
	Select chapters higher than 10.	LD/DVR player

Operating other Pioneer components with this unit's sensor

Many Pioneer components have **SR CONTROL** jacks which can be used to link components together so that you can use just the remote sensor of one component. When you use a remote control, the control signal is passed along the chain to the appropriate component.[1]

Important

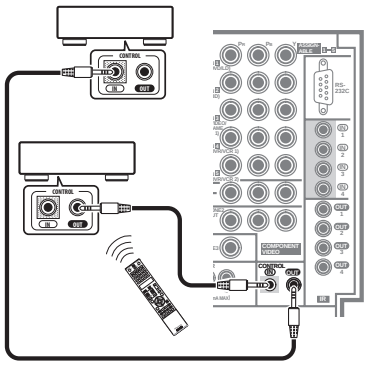
- Note that if you use this feature, *make sure that you also have at least one set of analog audio, video or HDMI jacks connected* to another component for grounding purposes.

1 Decide which component you want to use the remote sensor of.

When you want to control any component in the chain, this is the remote sensor at which you'll point the corresponding remote control.

2 Connect the CONTROL OUT jack of that component to the CONTROL IN jack of another Pioneer component.

Use a cable with a mono mini-plug on each end for the connection.



3 Continue the chain in the same way for as many components as you have.

Note

1 • If you want to control all your components using this amplifier's remote control, see *Setting the remote to control other components* on page 106.
• If you have connected a remote control to the **CONTROL IN** jack (using a mini-plug cable), you won't be able to control this unit using the remote sensor.
• See *Using this amplifier with a Pioneer plasma television* on page 68 if you are connecting a Pioneer plasma television.

Chapter 13:
Additional information

Speaker Setting Guide

In order to achieve an even better surround effect, it is important to accurately position the speakers and make their volume and tone characteristics uniform so as to finely focus the multi-channel sound.

The three major elements in positioning the speakers are **distance**, **angle** and **orientation** (the direction in which the speakers are pointing).

Distance: The distance of all the speakers should be equal.

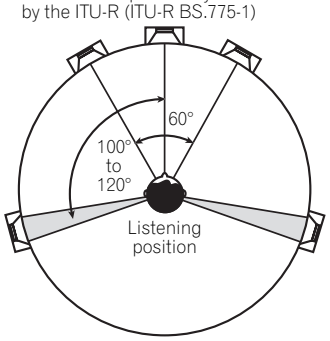
Angle: The speakers should be placed at the angles shown in Fig. 1 and be horizontally symmetrical.

Orientation: The orientation should be horizontally symmetrical.

In most homes, however, it is not possible to achieve this environment. For the distance, on this amplifier it is possible to automatically correct the speaker distance electrically to a precision of 1 cm using the Auto MCACC Setup function (page 11) and to adjust precisely using the procedure described at Precision Distance (page 45). For the volume and sound quality as well, accurate sound field correction using the equalizer and speaker phase characteristic correction using the Full Band Phase Control function (page 14) together make it possible to achieve the ideal listening environment.

Here we consider mainly the two elements of **angle** and **orientation**, based on the ITU-R recommended 5.1-channel layout shown in Fig. 1.

Fig. 1 5.1-channel speaker layout recommended by the ITU-R (ITU-R BS.775-1)



This type of setup is based on the recommendations of the ITU-R (International Telecommunication Union – Radiocommunication Sector), an international organization specialized in the field of electric communications.

Step 1: Speaker layout and distance adjustment

Adjust the main speakers to the angles shown in Fig. 1. Use speaker stands or the like to make sure the speakers are steady, and leave at least 10 cm from the surrounding walls. Position the speakers attentively so that the speakers on the left and right are at equal angles from the listening position (center of the adjustments). (We recommend using cords, etc., when adjusting the layout.) Ideally all the speakers should be equidistant from the listening position.

Tip

- If the speakers cannot be set at equal distances (on a circle), use the Auto MCACC Setup speaker distance correction and Fine Speaker Distance functions to make them equalize the distance artificially.

Step 2: Adjusting the speaker height

Adjust the heights (angles) of the different speakers.

Adjust so that the front speaker units reproducing mid- and high frequencies is roughly at the height of the ears.

If the center speaker cannot be set at the same height as the front speakers, adjust its angle of elevation to point it to the listening position.

Set surround speaker 1 so that it is not under the height of the ears.

Step 3: Adjusting the speaker orientation

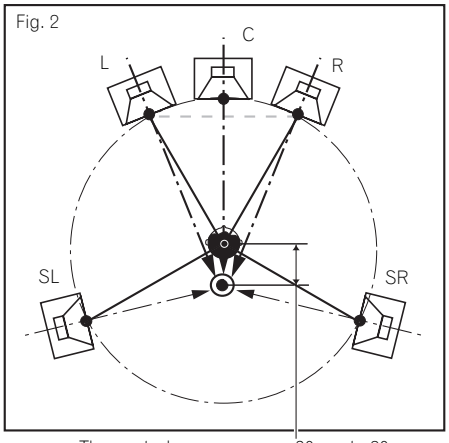
If the left and right speakers are not pointing in the same direction, the tone will not be the same on the right and left, and as a result the sound field will not be reproduced properly. However, if all the speakers are pointed towards the listening position, the sound field will seem cramped. Testing by the Pioneer Multi-channel Research Group has shown that a good sense of sound positioning can be achieved by pointing all the speakers towards an area 30 cm to 80 cm behind the listening position (between the surround speakers and the listening position).

However, the sense of sound positioning can differ according to the conditions in the room and the speakers being used. In smaller environments in particular (when the front speakers are close to the listening position), with this method the speakers will be pointed too inward. We suggest you use this example of installation as reference when trying out different installation methods.

Tip

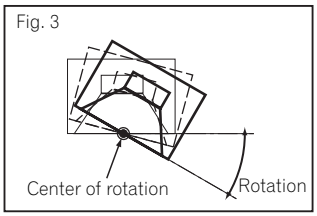
- When adjusting the orientation of the speakers, turn the speakers with the center of the speakers' baffle surfaces as the axis so that the speakers' center positions do not change.

Fig. 2



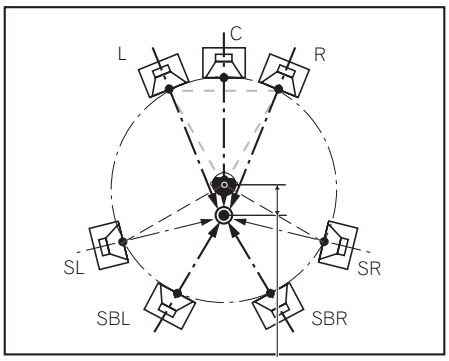
The central axes converge 30 cm to 80 cm behind the listening position.

Fig. 3



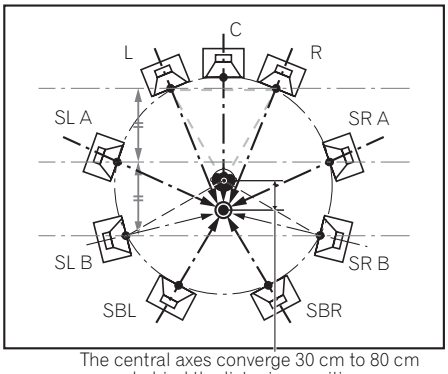
Examples of recommended speaker layouts based on the ITU-R (Fig.1) for systems with more than 5.1 channels

- For 7.1-channel (or 7.2-channel) systems



The central axes converge 30 cm to 80 cm behind the listening position.

- For 9.1-channel (or 9.2-channel) systems



The central axes converge 30 cm to 80 cm behind the listening position.

Step 4: Positioning and adjusting the subwoofer

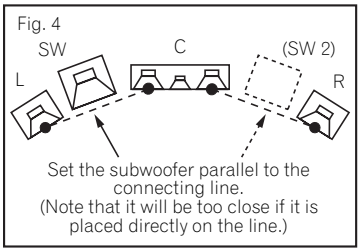
Placing the subwoofer between the center and front speakers makes even music sources sound more natural (If there is only one subwoofer, it doesn't matter if it is placed on the left or right side). The low bass sound output from the subwoofer is not directional and there is no need to adjust the height. Normally the subwoofer is placed on the floor. Put it in a position at which it will not cancel out the bass sound output from the other speakers. Also note that placing it near a wall may result in sympathetic vibrations with the building that could excessively amplify the bass sound.

If the subwoofer must be installed near a wall, place it at an angle so that it is not parallel to the wall surface. This can help reduce any sympathetic vibrations, but depending on the shape of the room this could result in standing waves. However, even if standing waves are generated, their influence on the sound quality can be prevented using the Auto MCACC's standing wave control function (page 46).

Tip

- Setting the subwoofer with the line connecting the woofer (middle and low frequency reproduction units) sections of the center and front speakers parallel to the subwoofer's front surface achieves a more natural, powerful bass sound.

Fig. 4



Step 5: Default settings with the Auto MCACC Setup (auto sound field correction) function
It is more effective to perform the Auto MCACC Setup (page 11) and Precision Distance (page 45) procedure once the adjustments described above have been completed.

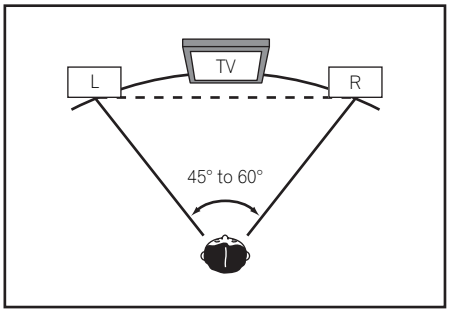
Tip

- The distance to the subwoofer may be slightly larger than the distance actually measured with a tape measure, etc. This is because this distance is corrected for electric delay, and is not a problem.

Positional relationship between speakers and monitor

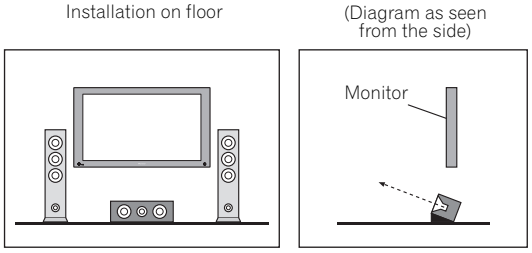
Position of front speakers and monitor

The front speakers should be as equidistant as possible to the monitor.



Position of center speaker and monitor

Since mostly dialogs are output from the center speaker, keeping the center speaker as close as possible to the screen makes the overall sound more natural. For TVs using Braun tubes, however, when installing the center speaker on the floor, adjust its angle of elevation to point it towards the listening position.



- If the center speaker is not of the shielded type, install it away from the TV.
- When installing the center speaker on top of the monitor, place it facing slightly downwards towards the listening position.

Troubleshooting

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest Pioneer authorized independent service company to carry out repair work.

Power

Symptom	Remedy
The power does not turn on.	• Make sure that the power cable is plugged in to an active power outlet. • Try disconnecting from the power outlet, then plugging back in.
The amplifier suddenly switches off or the Phase Control indicator blinks.	• Check that there are no loose strands of speaker wire touching the rear panel or another set of wires. If so, re-attach the speaker wires, making sure there are no stray strands. • The amplifier may have a serious problem. Disconnect from the power and call a Pioneer authorized independent service company.
During loud playback the power suddenly switches off.	• Turn down the volume. • Lower the 63 Hz and 125 Hz equalizer levels in the *Manual MCACC setup* on page 44. • Switch on the digital safety feature. While holding down the **SETUP** button on the front panel, press ⏻ **STANDBY/ON** to set this amplifier to the standby mode. Use ⬆/⬇ to select **DIGITAL SAFETY [OFF]**, and then use ⬅/➡ to select **1** or **2** (select **D.SAFETY OFF** to deactivate this feature). If the power switches off even with **2** switched on, turn down the volume. With **1** or **2** on, some features may be unavailable.
The unit does not respond when the buttons are pressed.	• Try switching the amplifier off, then back on again. • Try disconnecting the power cable, then connect again.
AMP ERR blinks in the display, then the power automatically switches off. The **MCACC** blinks and the power does not turn on.	• The amplifier may have a serious problem. Do not try switching the amplifier on. Contact a Pioneer authorized independent service company for help.
AMP OVERHEAT flashes, the power turns off, and the power indicator flashes.	• Allow the unit to cool down in a well-ventilated place before switching back on. • Wait at least 1 minute, then try turning the power on again.

No sound

Symptom	Remedy
No sound is output when an input source is selected. No sound output from the front speakers.	• Check the volume, mute setting (press **MUTE**) and speaker setting (press **SPEAKERS**). • Make sure the correct input source is selected. • Check that the MCACC setup microphone is disconnected. • Make sure the correct input signal is selected (press **SIGNAL SEL**). Note that when **PCM** is selected, you won't be able to hear any other signal format. • Check that the source component is connected properly (see *Connecting your equipment* on page 16). • Check that the speakers are connected properly (see *Connecting the speakers* on page 28).
No sound from the surround or center speakers.	• Check that the Stereo listening mode or the Front Stage Surround Advance mode isn't selected; select one of the surround listening modes (see *Listening in surround sound* on page 34). • Check that the surround/center speakers are not set to **NO** (see *Speaker Setting* on page 52). • Check the channel level settings (see *Channel Level* on page 53). • Check the speaker connections (see *Connecting the speakers* on page 28).
No sound from surround back speakers.	• Check that the surround back speakers are set to **LARGE** or **SMALL** (see *Speaker Setting* on page 52). • Make sure surround back processing is set to **SBch ON** (see *Using surround back channel processing* on page 37). • If the source is Dolby Surround EX or DTS-ES with no flag to indicate 6.1 compatibility, then with surround back processing set to **SBch Auto**, there will be no sound from the surround back speakers. In this case, set to **SBch ON** (see *Using surround back channel processing* on page 37). • If the source does not have 6.1 playback channels, make sure that surround back processing is set to **SBch ON** and a surround mode is selected (see *Listening in surround sound* on page 34). • Check the speaker connections (see *Connecting the speakers* on page 28). If only one surround back speaker is connected, make sure it's connected to the left channel speaker terminal.

Symptom	Remedy
No sound from subwoofer.	• Check that the subwoofer is connected properly, switched on and the volume turned up. • If your subwoofer has a sleep function, make sure it is switched off. • Make sure that the Subwoofer setting is **YES** or **PLUS** (see *Speaker Setting* on page 52). • The crossover frequency may be set too low; try setting it higher to match the characteristics of your other speakers (see *Speaker Setting* on page 52). • If there is very little low frequency information in the source material, change your speaker settings to Front: **SMALL** / Subwoofer: **YES**, or Front: **LARGE** / Subwoofer: **PLUS** (see *Speaker Setting* on page 52). • Check that the LFE channel is not set to **OFF**, or a very quiet setting (see *Setting the Audio options* on page 99). • Check the speaker level settings (see *Channel Level* on page 53). • Check that the subwoofer is only connected to the PREOUT SUBWOOFER2 terminal. When only connecting one subwoofer, connect it to the PREOUT SUBWOOFER1 terminal.
No sound from one speaker.	• Check the speaker connection (see *Connecting the speakers* on page 28). • Check the speaker level settings (see *Channel Level* on page 53). • Check that the speaker hasn't been set to **NO** (see *Speaker Setting* on page 52). • The channel may not be recorded in the source. By using one of the advanced effect listening mode, you may be able to create the missing channel (see *Listening in surround sound* on page 34).
Sound is produced from analog components, but not from digital ones (DVD, LD, CD-ROM etc.).	• Check that the input signal type is set to **DIGITAL** (see *Choosing the input signal* on page 37). • Make sure that the digital input is assigned correctly for the input jack the component is connected to (see *The Input Setup menu* on page 94). • Check the digital output settings on the source component. • If the source component has a digital volume control, make sure this is not turned down. • Make sure that the multichannel analog inputs are not selected. Select any other input source.
No sound is output or a noise is output when Dolby Digital/DTS software is played back.	• Check that your DVD player is compatible with Dolby Digital/DTS discs. • Check the digital output settings of your DVD player. Make sure that the DTS signal output is set to On. • If the source component has a digital volume control, make sure this is not turned down.
No sound when using the System Setup or Status menu.	• If the HDMI input source is selected, sound is muted until exiting either menu. • If sound is muted in the sub zone (**ZONE 2**), it will be restored after exiting the System Setup menu.

Other audio problems

Symptom	Remedy
A multichannel DVD source appears to be downmixed to 2 channels during playback.	• Make sure that the multichannel analog inputs are selected (see *Selecting the multichannel analog inputs* on page 60).
Noise is output when scanning a DTS CD.	• This is not a malfunction of the amplifier. The scan function of your player alters the digital information, making it unreadable, resulting in noise being output. Lower the volume when scanning.
When playing a DTS format LD there is audible noise on the soundtrack.	• Make sure that the input signal type is set to **DIGITAL** (see *Choosing the input signal* on page 37).
Can't record audio.	• You can only make a digital recording from a digital source, and an analog recording from an analog source. • For digital sources, make sure that what you're recording isn't copy protected. • Check that the **OUT** jacks are properly connected to the recorders input jacks (see *Connecting analog audio sources* on page 26).
Recorded audio is different from the current source, or inaudible.	• The **RECOUT** source is set to an input source other than the source you're listening to. Select **RECOUT SOURCE** to record the current input source (see *Playing a different source when recording* on page 102).
Subwoofer output is very low.	• To route more signal to the subwoofer, set it to **PLUS** or set the front speakers to **SMALL** (see *Speaker Setting* on page 52).
Everything seems to be set up correctly, but the playback sound is odd.	• The speakers may be out of phase. Check that the positive/negative speaker terminals on the amplifier are matched with the corresponding terminals on the speakers (see *Connecting the speakers* on page 28).
The **PHASE CONTROL** feature doesn't seem to have an audible effect.	• If applicable, check that the lowpass filter switch on your subwoofer is off, or the lowpass cutoff is set to the highest frequency setting. If there is a **PHASE** setting on your subwoofer, set it to 0° (or depending on the subwoofer, the setting where you think it has the best overall effect on the sound). • Make sure the speaker distance setting is correct for all speakers (see *Speaker Distance* on page 54).
Noise or hum can be heard even when there is no sound being input.	• Check that personal computers or other digital components connected to the same power source are not causing interference.

Symptom	Remedy
There seems to be a time lag between the speakers and the output of the subwoofer.	• See *Automatically setting up for surround sound (MCACC & Full Band Phase Control)* on page 11 to set up your system again using MCACC (this will automatically compensate for a delay in the subwoofer output).
Can't use the SR+ features.	• Make sure that HDMI Control is set to OFF (see *Setting the HDMI Control mode* on page 92).
The maximum volume available (shown in the front LCD display) is lower than the **+12dB** maximum.	• This is not a malfunction. If the levels in *Channel Level* on page 53 have been adjusted, the maximum volume will change accordingly.
No sound is output from the CD-R/TAPE/MD OUT, DVR/VCR 1 OUT or DVR/VCR 2 OUT jack.	• Make sure that **ZONE 3 / RECSEL Setting** in the **ZONE Audio Setup** menu is set to **RECSEL** (see *ZONE Audio Setup* on page 97).
Can't select ZONE 3.	• Make sure that **ZONE 3 / RECSEL Setting** in the **ZONE Audio Setup** menu is set to **ZONE 3** (see *ZONE Audio Setup* on page 97).

Video

Symptom	Remedy
No image is output when an input is selected.	• Check the video connections of the source component (see page 23). • For HDMI, or when digital video conversion is switched off (in *Setting the Video options* on page 101), you must connect your TV to this amplifier using the same type of video cable as you used to connect your video component. • Make sure the input assignment is correct for components connected using component video, HDMI or S-Video cables (see *The Input Setup menu* on page 94). • Check the video output settings of the source component. • Check that the video input you selected on your TV is correct. • Some components (such as video game units) have resolutions that may not be converted. If adjusting this amplifier's Resolution setting (in *Setting the Video options* on page 101) and/or the resolution settings on your component or display doesn't work, try switching Digital Video Conversion (in *Setting the Video options* on page 101) **OFF**.
Can't record video.	• Check that the source is not copy-protected. • The video converter is not available when making recordings. Check that the same type of video cable is used for connecting both the recorder and the video source (the one you want to record) to this amplifier.
Noisy, intermittent, or distorted picture.	• Sometimes a video deck may output a noisy video signal (during scanning, for example), or the video quality may just be poor (with some video game units, for example). The picture quality may also depend on the settings, etc. of your display device. Switch off the video converter and reconnect the source and display device using the same type of connection (component, S-Video or composite), then start playback again.
ZONE2 video convert function does not work.	• Conversion is not possible when the video input signal is a component signal. Either use the composite or S-Video terminal, or connect to the TV using a component cable. • Turn the video convert function off and connect the source component and monitor with the same type of cord.
The external image is not displayed on the LCD screen or the picture is disturbed.	• The external video will not be displayed properly in the following conditions. Press the **LCD VIEW** button to switch to the OSD mode. – With HDMI inputs. – When the video converter is off. – When the resolution is set to PURE. – When no external image is being input. – When a non-compatible signal is being input.

Settings

Symptom	Remedy
The Auto MCACC Setup continually shows an error.	• The ambient noise level may be too high. Keep the noise level in the room as low as possible (see also *Problems when using the Auto MCACC Setup* on page 13). If the noise level cannot be kept low enough, you will have to set up the surround sound manually (page 52).
After using the Auto MCACC Setup, the speaker size setting is incorrect.	• There may have been some low frequency noise in the room from an air-conditioner, motor, etc. Switch off all other appliances in the room and use Auto MCACC Setup again. • Depending on a number of factors (room size, speaker placement, etc.) this may occur in some cases. Change the speaker setting manually in *Speaker Setting* on page 52, and use the **ALL (Keep SP System)** option for the **Custom Menu** in *Automatic MCACC (Expert)* on page 40 if this is a recurring problem.

Symptom	Remedy
Can't adjust the Fine Speaker Distance setting (page 45) properly.	• Check that the speakers are all in phase (make sure the positive (**+**) and negative (**–**) terminals are matched up properly).
The display shows **KEY LOCK ON** when you try to make settings.	• With the amplifier in standby, press ⏻ **STANDBY/ON** while holding down the **SPEAKERS** button to disable the key lock.
Most recent settings have been erased.	• The power cord was disconnected from the wall while adjusting this setting.

Professional Calibration EQ graphical output

Symptom	Remedy
The EQ response displayed in the graphical output following calibration does not appear entirely flat.	• There are cases where the graph does not appear flat (even when selecting **ALL CH ADJUST** in the Auto MCACC Setup) due to adjustments made to compensate for room characteristics to achieve optimal sound. • Areas of the graph may appear identical (before and after) when there is little or no adjustment needed. • The graph may appear to have shifted vertically when comparing before and after measurements.
EQ adjustments made using the *Manual MCACC setup* on page 44 do not appear to change the graphical output.	• Despite level adjustments being made, the filters used for analysis may not display these adjustments in the graphical output. However, these adjustments are taken this into account by the filters dedicated to overall system calibration.
Lower frequency response curves do not seem to have been calibrated for **SMALL** speakers.	• Low frequencies used in bass management (the subwoofer channel) will not change for speakers that have been specified as **SMALL** in the configuration, or do not output these frequencies. • Calibration is performed, but due to your speakers' low frequency limitations, no measurable sound is output for display.
Graphical output data seems to have disappeared.	• If the power is switched off, the measurement data for graphical output to a PC is cleared.

Display

Symptom	Remedy
The display is dark or off.	• Press **DIMMER** repeatedly to select a different brightness.
After making an adjustment the display goes off.	• Press **DIMMER** repeatedly to select a different brightness.
You can't get **DIGITAL** to display when using the **SIGNAL SEL** button.	• Check the digital connections and make sure that the digital inputs are assigned correctly (see *The Input Setup menu* on page 94). • If the multichannel analog inputs are selected, select a different input source.
DOLBY DIGITAL or DTS does not appear on the STATUS audio input information screen when playing Dolby/DTS software.	• DOLBY DIGITAL or DTS does not appear if playback is paused. • Check the playback (especially the digital output) settings of the source component.
When playing a DVD-Audio disc, the DVD player display shows **96 kHz**. However, the amplifier's display does not.	• This is not a malfunction. 96 kHz audio from DVD-Audio discs is only output from the analog outputs of the DVD player. This amplifier cannot show the playback sample rate when using the analog inputs.
During playback of a DTS 96/24 source, the display doesn't show **96 kHz**.	• Make sure that the amplifier is set to **AUTO** or **DIGITAL** (see *Choosing the input signal* on page 37).
When playing Dolby Digital or DTS sources, some input channels do not light correctly on the STATUS audio input information screen.	• Check that the player is connected using a digital connection. • Make sure that the amplifier is set to **AUTO** or **DIGITAL** (see *Choosing the input signal* on page 37). • Check that the player isn't set up so that Dolby Digital and DTS sources are converted to PCM. • Ensure that if there are several audio tracks on the disc, the Dolby Digital or DTS is selected.
OSD does not appear in the LCD display.	• Press the **LCD VIEW** button on the front panel and change the LCD settings (page 103).
When playing certain discs, none of the amplifier's input signal is displayed on the STATUS screen.	• The disc may not contain 5.1/6.1 channel material. Check the disc packaging for more on what audio tracks are recorded on the disc.

Symptom	Remedy
When playing a disc with the listening mode set to Auto Surround, **PL II** or **Neo:6** appear on the amplifier.	• Make sure that the amplifier is set to **AUTO** or **DIGITAL** (see *Choosing the input signal* on page 37). • If a two channel soundtrack is currently playing (including Dolby Surround encoded), then this is not a malfunction. Check the disc packaging for details about the audio tracks available.
During playback of a Surround EX or DTS-ES source on the **SBch AUTO** setting, **EX** or **ES** does not appear, or the signal is not properly processed.	• The source may be Dolby Surround EX/DTS-ES software, but it has no flag to indicate it is 6.1 compatible. Set to **SBch ON** (see *Using surround back channel processing* on page 37), then switch to the THX Surround EX or Standard EX listening mode (see *Listening in surround sound* on page 34).
During playback of DVD-Audio, the display shows **PCM**.	• This will occur when playing DVD-Audio material over the HDMI connection. This is not a malfunction.

Remote control

Symptom	Remedy
Cannot be remote controlled.	• Try replacing the batteries in the remote control (see *Loading the batteries* on page 7). • Be sure to operate within 7 m and a 30° angle of the remote sensor on the front panel (see *Operating range of remote control unit* on page 31). • Check that there are no obstacles between the amplifier and the remote control. • Make sure that there is no fluorescent or other strong light shining on to the remote sensor. • Check the connections of the **CONTROL IN** jack (see *Operating other Pioneer components with this unit's sensor* on page 111).
Other components can't be operated with the system remote.	• If the battery ran down, the preset codes may have been cleared. Re-enter the preset codes. • The preset code may be incorrect. Redo the procedure for entering preset codes.
The SR cable is connected, but the connected components can't be operated with the remote.	• Reinsert the SR cable, making sure it's connected to the right jack (see *Using this amplifier with a Pioneer plasma television* on page 68). • Make sure that there is an analog or HDMI connection between the units. This is necessary for the SR feature to work. • Check that the other component is made by Pioneer. The SR feature only works with Pioneer equipment.

i.LINK interface

Symptom	Remedy
No sound is output.	• Check that the source player is compatible with i.LINK audio. • Check the output settings of the source player. • Make sure that **i.LINK** or **AUTO** is selected using the **SIGNAL SEL** button (see *Choosing the input signal* on page 37).
The i.LINK indicator does not light up even when an i.LINK-equipped component is selected.	• Make sure that **i.LINK** or **AUTO** is selected using the **SIGNAL SEL** button (see *Choosing the input signal* on page 37). • Check the i.LINK connections; use an i.LINK cable of less than 3.5 m. • Check that the source components conforms to the i.LINK Audio format. • Make sure that all components connected between the amplifier and the source are switched on.
PQLS OFF or **PQLS ON** is displayed temporarily on your amplifier and the sound output is discontinued.	• During playback through an i.LINK connection, if you change the settings for other i.LINK components, the sound will be discontinued momentarily. This is not a malfunction.
The program format indicators don't disappear when SACD playback stops.	• The program format indicators remain lit until another format source is input. This is not a malfunction.
You can't get i.LINK to display when using the **SIGNAL SEL** button.	• Make sure your i.LINK source components are switched on. • Check that i.LINK is assigned correctly (see *The Input Setup menu* on page 94).
After upgrading a component, it is not recognized and cannot be selected using the i.LINK connection.	• You may need to reset the i.LINK database memory in the amplifier (use the front panel): 1 In the standby mode, press ⏻ **STANDBY/ON** while pressing **SETUP**. 2 Use ↑/↓ to select **i.LINK DB [NO]**, then press **ENTER**. 3 Use ←/→ to select **Clear**, then press **ENTER**. 4 When **Clear? [OK]** appears, press **ENTER** again. Resetting is completed once the normal screen appears. If **DB ERROR** is displayed, perform the procedure again.

HDMI

Symptom	Remedy
The HDMI indicator blinks continuously.	• Check all the points below.
No picture or sound.	• This amplifier is HDCP-compatible. Check that the components you are connecting are also HDCP-compatible. If they are not, please connect them using the component, S-Video or composite video jacks. • Depending on the connected source component, it's possible that it will not work with this amplifier (even if it is HDCP-compatible). In this case, connect using the component, S-Video or composite video jacks between source and amplifier. • If the problem still persists when connecting your HDMI component directly to your monitor, please consult the component or monitor manual or contact the manufacturer for support. • If video images do not appear on your TV or plasma television, try adjusting the resolution, DeepColor or other setting for your component. • If '**NOT SUPPORT**' appears in the amplifier's display, try adjusting the resolution, DeepColor or other setting for your component. • While analog video signals are being output over HDMI, use a separate connection for audio output. • When this amplifier reproduces MULTI CH IN audio sources with the HDMI setting set to THROUGH, you cannot hear audio output from all channels. In this case, make a digital or analog audio connection. • To output signals in DeepColor, use an HDMI cable (High Speed HDMI™ Cable) to connect this amplifier to a component or TV with the DeepColor feature.
No picture.	• Try changing the Resolution setting (in *Setting the Video options* on page 101). • Set the HDMI output setting to the connected HDMI OUT terminal (in *Switching the HDMI output* on page 103).
No sound, or sound suddenly ceases.	• Check that the HDMI AV setting is set to **AMP/THROUGH**. • If the component is a DVI device, use a separate connection for the audio. • If analog video is being output over HDMI, please use a separate connection for the audio. • Check the audio output settings of the source component.
Noisy or distorted picture.	• Sometimes a video deck may output a noisy video signal (during scanning, for example), or the video quality may just be poor (with some video game units, for example). The picture quality may also depend on the settings, etc. of your display device. Switch off the video converter and reconnect the source and display device using the same type of connection (component, S-Video or composite), then start playback again. • If the problem still persists when connecting your HDMI component directly to your monitor, please consult the component or monitor manual or contact the manufacturer for support.
HDCP ERROR shows in the display.	• Check whether or not the connected component is compatible with HDCP. If it is not compatible with HDCP, reconnect the source device using a different type of connection (component, S-Video or composite). Some components that are compatible with HDCP still cause this message to be displayed, but so long as there is no problem with displaying video, this is not a malfunction.
Amp-linked operation not possible using HDMI control function.	• Select **ON** for the HDMI control setting (see *Setting the HDMI Control mode* on page 92). • Turn the TV's power on before turning on this amplifier's power. • Set the TV side HDMI control setting to **ON**. • Connect the TV to the **HDMI OUT 1** terminal and set the HDMI output to **HDMI OUT 1**. Then turn on first the TV's power, then this amplifier's power.

Important information regarding the HDMI connection

There are cases where you may not be able to route HDMI signals through this amplifier (this depends on the HDMI-equipped component you are connecting–check with the manufacturer for HDMI compatibility information).

If you aren't receiving HDMI signals properly through this amplifier (from your component), please try one of the following configurations when connecting up.

Configuration A

Use component video cables to connect the video output of your HDMI-equipped component to the amplifier's component video input. The amplifier can then convert the analog component video signal to a digital HDMI signal for transmission to the display. For this configuration, use the most convenient connection (digital is recommended) for sending audio to the amplifier. See the operating instructions for more on audio connections.

Note

- The picture quality will change slightly during conversion.

Configuration B

Connect your HDMI-equipped component directly to the display using an HDMI cable. Then use the most convenient connection (digital is recommended) for sending audio to the amplifier. See the operating instructions for more on audio connections. Set the display volume to minimum when using this configuration.

Note

- If your display only has one HDMI terminal, you can only receive HDMI video from the connected component.
- Depending on the component, audio output may be limited to the number of channels available from the connected display unit (for example audio output is reduced to 2 channels for a monitor with stereo audio limitations).
- If you want to switch the input source, you'll have to switch functions on both the amplifier and your display unit.
- Since the sound is muted on the display when using the HDMI connection, you must adjust the volume on the display every time you switch input sources.

HOME MEDIA GALLERY

Symptoms	Remedy
Home Media Gallery/NETWORK	
No servers are found.	• Check the physical connections (hub, 100BASE-TX/10BASE-T, or crossed cable and other cable quality when cabled directly to a PC). It is strongly recommended to use 100BASE-TX for playback quality and display speed. • Check the logical connections (IP Address setup, DHCP, etc.). Confirm the IP Address is correct if acquired by Auto IP and Firewall setup. Also check if the IP Address is properly acquired with DHCP on the "Network Setup" screen that follows the "Setup" menu. • Using two or more application servers on a single PC may cause unstable operation. For proper operation, it is strongly recommended that one application server is used on a single PC. • Check the PC if its media server is running. Restart if necessary. Check if one or more servers are On (this may cause malfunction). • Check if the PC is operating properly. Reboot the PC after confirming its specifications and setup. • Check the media server setup. If a client is registered manually the setup procedure may have to be run again. An option "Not Allowed" may have been selected for connections. • Check if UPnP (Universal Plug and Play) is enabled on your router. If it is not, enable it. Refer to your router's instruction manual for procedures. • Wait for a short period then select "Update to Latest Information" from the Tool Menu. (See page 78)
No previously connected server(s) found (items in "Select Servers" are dimmed).	• Refer to the possible solutions provided for "No servers are found".
An available server is selected but cannot be navigated.	• Check if the server is correctly set up for file sharing, if the target folder has been deleted, or if one or more folders have been corrupted on the server. • Check if there are too many files in each folder.
A server is arbitrarily selected.	• This arbitrary selection happens when the server you used before had been set to display the top menu screen (if you reset it, other servers connected are also reset). When the "Single Server/USB" option is selected on the "Auto Connection Setup" screen that follows the "Setup" menu, the server is automatically accessed if only one server is connected. Use the Tool Menu to select the proper server. (See page 78)
File/folder configuration differs from one server to another (strange configuration).	• The Media Navigator displays the server contents as classified by the server. • If no information (such as ID3 tag) is contained in the file, files cannot be classified on the server.

Symptoms	Remedy
"The list could not be acquired." appears on the Server List screen.	• Refer to the possible solutions provided for "No servers are found". • If the above does not solve the problem, try turning **AV AMPLIFIER**⏻ off on the remote control unit then turn ⏻ **STANDBY/ON** on on the amplifier.
A communication error message appears.	• Refer to the possible solutions provided for "No servers are found". • If the above does not solve the problem, try turning **AV AMPLIFIER**⏻ off on the remote control unit then turn ⏻ **STANDBY/ON** on on the amplifier.
Home Media Gallery/PLAYBACK	
Image or sound is interrupted or distorted (Block noise appears).	• Check the physical connections (hub, 100BASE-TX/10BASE-T, or crossed cable and other cable quality when cabled directly to a PC). It is strongly recommended to use 100BASE-TX for playback quality and display speed. • Check if the PC is operating properly. Reboot the PC after confirming its specifications and setup. • Check if the file complies to the supported format, bit rate or profile. Also check if the file is damaged. • When connected by a wireless LAN, check if the bit rate is sufficient. • Some files that comply with the supported format may not be played back or displayed.
Cannot play or display.	• Check the physical connections (hub, 100BASE-TX/10BASE-T, or crossed cable and other cable quality when cabled directly to a PC). It is strongly recommended to use 100BASE-TX for playback quality and display speed. • Check if the PC is operating properly. Reboot the PC after confirming its specifications and setup. • Check if the file complies to the supported format, bit rate or profile. Also check if the file is damaged. • Check if the leasing contract for the server has expired. • When connected by a wireless LAN, check if the bit rate is sufficient. • Some files that comply with the supported format may not be played back or displayed. • It takes time to capture and display a large-sized image. If this is the case, no operation may be performed. • See the Pioneer website (http://www.pioneer.eu) for the formats that are supported.
Home Media Gallery/FIRMWARE	
No updates are possible on USB.	• Check if the device is Mass Storage Class compliant, if it is connected properly, nothing is damaged (power unit, mode such as Mass Storage mode and media format, etc.), if it contains the supported files, and if the speed of the device is sufficient (poor device speed may result in interrupted or delayed display of images due to a bit-rate problem). When using a digital camera that is not Mass Storage Class compliant, insert the Flash Memory card into the multi-card reader. • Confirm that the device is correctly inserted or removed. • Check that the firmware file has been correctly downloaded. Also check the file size. • See the Pioneer website (http://www.pioneer.eu) for details.
Home Media Gallery/USB	
USB devices are not properly recognized.	• Check if the device is Mass Storage Class compliant, if it is connected properly, nothing is damaged (power unit, mode such as Mass Storage mode and media format, etc.), if it contains the supported files, and if the speed of the device is sufficient (poor device speed may result in interrupted or delayed display of images due to a bit-rate problem). When using a digital camera that is not Mass Storage Class compliant, insert the Flash Memory card into the multi-card reader. • Confirm that the device is correctly inserted or removed. • No USB hub is supported. When you connect a home network, connect directly to the device's USB port.
Image or sound is interrupted or distorted (Block noise appears).	• Verify that the file complies with the supported format, bit rate or profile. Also check the file for damage. • Some files that comply with the supported format may not play back or display properly. • Check if the device is Mass Storage Class compliant, if it is connected properly, nothing is damaged (power unit, mode such as Mass Storage mode and media format, etc.), if it contains the supported files, and if the speed of the device is sufficient (poor device speed may result in interrupted or delayed display of images due to a bit-rate problem). When using a digital camera that is not Mass Storage Class compliant, insert the Flash Memory card into the multi-card reader.
Home Media Gallery/Slide Show	
Slideshow (photo content) doesn't start.	• Check if the amplifier is placed into the pause or rotation mode. If that is the case, press ► or **ENTER** to start the slideshow.
Next picture does not appear in the slideshow.	• The time needed to display a picture may be longer than the time set to display in Slide Show settings. Reduce the picture size using a PC and try again. • Slide Show only displays the supported files. If there is only one supported file, that file will remain on the display and not display any other files.

iPod messages

Symptom	Cause	Action
Error I1	There is a problem with the signal path from the iPod to the amplifier.	Switch off the amplifier and reconnect the iPod to the amplifier. If this doesn't seem to work, try resetting your iPod.
Error I2	The software version being used with the iPod needs to be updated.	Update the software being used with the iPod (please use the latest iPod software versions later than the iPod updater 2004-10-20).
Error I3	When operation is not possible with the iPod operation mode set to **Type 1**.	Switch the iPod operation mode set to **Type 2** (page 58).
	When the iPod software version is too old.	Update the iPod software to the latest version.
Error I4	When there is no response from the iPod.	Update the iPod software to the latest version.
No Music Track	There are no playable songs currently stored in the iPod.	Input some music files compatible with iPod playback. When you want to play videos, press **iPod CTRL** to play the video track using the controls on the iPod.
No Track	When there are no tracks in the category selected on the iPod.	Select a different category.

i.LINK messages

You may see the following messages displayed in the front LCD display when using the i.LINK interface.

Message	Explanation
BUS FULL	The i.LINK bus has reached its capacity and cannot transmit any more data.
CANNOT LINK 1	The connection between the amplifier and the selected i.LINK-equipped component is unstable. If the i.LINK cables appear to be connected properly and both the amplifier and i.LINK-equipped component are on, switch both units off, then on again to re-establish the connection between them.
CANNOT LINK 2	The amplifier can't identify the selected i.LINK-equipped component. For example, the amplifier may not be able to identify an i.LINK-equipped personal computer.
LINK CHECK	The amplifier is checking the i.LINK network. It does this when components are added to, or removed from the network. The sound may be interrupted if this happens during playback.
LOOP CONNECT	The i.LINK network cannot function because the connected components form a loop. See *The Input Setup menu* on page 94 for more on this.
NO NAME	When an i.LINK-equipped component has no name, this message is displayed instead of the proper component name.
NO SIGNAL	A component is outputting an i.LINK signal that the amplifier cannot reproduce. This amplifier can only reproduce signals from i.LINK-Audio-equipped components. See *About i.LINK* on page 59 for more on this.
PQLS OFF	This is displayed on a playback component when PQLS turns off during playback. The sound may be interrupted momentarily when this happens.
PQLS ON	This is displayed on a playback component when PQLS turns on during playback. The sound may be interrupted momentarily when this happens.
UNKNOWN	When an i.LINK-equipped component name cannot be recognized, this message is displayed instead of the proper component name.

Meaning of messages displayed when the HDMI control function is set to ON

Message (error number)	Problem	Remedy
HDMI C ERR 110 to 190 **HDMI C ERR 1A0** **HDMI C ERR 1B0** **HDMI C ERR 1C0** **HDMI C ERR 2C0**	HDMI cable is not properly connected.	• Check the connection. • There may be a broken wire in the cable. • This amplifier or connected components may be damaged.

HOME MEDIA GALLERY messages

No.	Message	Problem
001	Content playback failed (001).	No details are available for the error
100	A communication error occurred (100).	No further details are available for the error
101	No response from the server (101).	Timeout period reaches due to delayed server response
102	Disconnected from the network (102).	Cables are disconnected
103	Invalid response was received from the server (103).	Invalid response from the server
300	This format is not supported (300).	A file that is not supported is selected
400	License of the selected file is not valid (400).	A file that is copyright protected and not playable on this unit is selected
401	License of the selected file is not valid (401).	A file that is copyright protected and not playable on this unit is selected
403	License of the selected file is not valid (403).	A file that is copyright protected and not playable on this unit is selected
404	License of the selected file is not valid (404).	A file that is copyright protected and not playable on this unit is selected
500	License of the selected file is not valid (500).	A file that the server does not allow you to play is selected A file that is copyright protected and not playable on this unit is selected
501	License of the selected file is not valid (501).	A file that the server does not allow you to play is selected A file that is copyright protected and not playable on this unit is selected
503	License of the selected file is not valid (503).	A file that the server does not allow you to play is selected A file that is copyright protected and not playable on this unit is selected
504	License of the selected file is not valid (504).	A file that the server does not allow you to play is selected A file that is copyright protected and not playable on this unit is selected
505	License of the selected file is not valid (505).	A file that the server does not allow you to play is selected A file that is copyright protected and not playable on this unit is selected

- The message consists of “Error”, “Warning” and “Information” is displayed for 5 seconds.

Displaying pictures in the Home Media Gallery for an extended period may cause an after-image.

Note

- If the unit does not operate normally due to external effects such as static electricity disconnect the power plug from the outlet and insert again to return to normal operating conditions.

Surround sound formats

Below is a brief description of the main surround sound formats you'll find on DVDs, satellite, cable and terrestrial broadcasts, and video cassettes.

Dolby

The Dolby technologies are explained below. See www.dolby.com for more detailed information.

Dolby Digital

Dolby Digital is a multichannel digital audio coding system widely used in cinemas, and in the home for DVD and digital broadcast soundtracks. It can deliver up to six discrete audio channels, comprising five full range channels and a special LFE (low frequency effects) channel used mainly for deep, rumbling sound effects; hence the term "5.1-channel" Dolby Digital.

In addition to the format features above, Dolby Digital decoders offer downmixing for compatibility with mono, stereo and Dolby Pro Logic audio from a number of bit rates and channels. Another feature, called Dialog Normalization, attenuates programs based on the average level of dialog in a program relative to its peak level (also known as Dialnorm) in order to achieve uniform playback level.

Dolby Digital Surround EX

Dolby Digital Surround EX (the EX stands for EXtended) is an extension of Dolby Digital encoding whereby a surround back channel is matrixed into the surround left/right channels for 6.1 channel playback. This allows for compatibility with Dolby Digital 5.1 channel decoding, as well as for decoding using Dolby Digital EX.

Dolby Pro Logic IIx and Dolby Surround

Dolby Pro Logic IIx is an improved version of the Dolby Pro Logic II (and Dolby Pro Logic) *decoding* system. Using the innovative "steering logic" circuit, this system extracts surround sound from sources as follows:

- **Dolby Pro Logic** – 4.1 channel sound (mono surround) from any stereo source
- **Dolby Pro Logic II** – 5.1 channel sound (stereo surround) from any stereo source
- **Dolby Pro Logic IIx** – 6.1 or 7.1 channel sound (stereo surround and surround back) from two channel or 5.1 (and 6.1) channel sources

With two channel sources, the ".1" subwoofer channel is generated by bass management in the amplifier.

Dolby Surround is an *encoding* system which embeds surround sound information within a stereo soundtrack, which a Dolby Pro Logic decoder can then use for enhanced surround listening with greater sound detail.

Dolby Digital Plus

Dolby Digital Plus is the next-generation audio technology for all high-definition programming and media. It combines the efficiency to meet future broadcast demands with the power and flexibility to realize the full audio potential expected in the upcoming high-definition era. Built on Dolby Digital, the multi-channel audio standard for DVD and HD broadcasts worldwide, Dolby Digital Plus was designed for the next-generation A/V amplifiers but remains fully compatible with all current A/V amplifiers.

Dolby Digital Plus delivers multi-channel audio programs of up to 7.1 channels (*) and supports multiple programs in a single encoded bitstream with the maximum bit rate potential of up to 6 Mbps and the maximum bit rate performance of up to 3 Mbps on HD DVD and 1.7 Mbps on Blu-ray Disc, and it outputs Dolby Digital bitstreams for playback on existing Dolby Digital systems. Dolby Digital Plus can accurately reproduce the sound originally intended by directors and producers.

It also features multi-channel sound with discrete channel output, interactive mixing and streaming capability in advanced systems. Supported by High-Definition Media Interface (HDMI), a single-cable digital connection is possible for high-definition audio and video.

Dolby TrueHD

Dolby TrueHD is the next-generation lossless encoding technology developed for high-definition optical discs in the upcoming era. Dolby TrueHD delivers tantalizing sound that is bit-for-bit identical to the studio master, unlocking the true high-definition entertainment experience on high-definition optical discs in the next generation. When coupled with high-definition video, Dolby TrueHD offers an unprecedented home theater experience with stunning sound and high-definition picture.

It supports bit rates of up to 18 Mbps and records up to 8 full-range channels (*) individually with 24-bit/96 kHz audio. It also features extensive metadata including dialogue normalization and dynamic range control. Supported by High-Definition Media Interface (HDMI), a single-cable digital connection is possible for high-definition audio and video.

HD DVD and Blu-ray Disc standards currently limit their maximum number of audio channels to eight, whereas Dolby Digital Plus and Dolby TrueHD support more than eight audio channels.

Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic", "Surround EX" and the double-D symbol are trademarks of Dolby Laboratories.

DTS

The DTS technologies are explained below. See www.dtstech.com for more detailed information.

DTS Digital Surround

DTS Digital Surround is a 5.1-channel audio coding system from DTS Inc. now widely used for DVD-Video, DVD-Audio, 5.1 music discs, digital broadcasts, and video games. It can deliver up to six discrete audio channels, comprising five full range channels, including an LFE channel. Higher sound quality is achieved through the use of a low compression rate, and high rates of transmittance during playback.

DTS-ES

DTS-ES (the ES stands for Extended Surround) is a decoder that is capable of decoding both DTS-ES Discrete 6.1 and DTS-ES Matrix 6.1 encoded sources. DTS-ES Discrete 6.1 gives 'true' 6.1 channel sound, with a completely separate (discrete) surround back channel. DTS-ES Matrix 6.1 has a surround back channel matrixed into the surround left/right channels. Both sources are also compatible with a conventional DTS 5.1 channel decoder.

DTS Neo:6

DTS Neo:6 can generate 7.1 channel surround sound from any matrixed stereo source (such as video or TV) and from 5.1 channel sources. It uses both the channel information already encoded into the source, as well as its own processing to determine channel localization (with two channel sources, the ".1" subwoofer channel is generated by bass management in the amplifier). Two modes (Cinema and Music) are available using DTS Neo:6 with two channel sources.

DTS 96/24

DTS 96/24 is an extension of the original DTS Digital Surround which offers high quality 96 kHz/24-bit audio using a DTS 96/24 decoder. This format is also fully backward compatible with all existing decoders. This means that DVD players can play this software using a conventional DTS 5.1 channel decoder.

DTS-EXPRESS

DTS-EXPRESS is a low-bitrate encoding technology supporting up to 5.1 channels with fixed data transfer rates. This format is incorporated with sub audio on HD DVD and secondary audio on Blu-ray Disc while boasting the potential applicability to upcoming broadcasts and memory audio contents.

DTS-HD Master Audio

DTS-HD Master Audio is a technology that delivers master audio sources recorded in a professional studio to listeners without any loss of data, preserving audio quality. DTS-HD Master Audio adopts variable data transfer rates, facilitating data transfer to the maximum rate of 24.5 Mbps in the Blu-ray disc format, 18.0 Mbps in the HD-DVD format, which by far exceeds that of a standard DVD. These high data transfer rates enable lossless transmission of 96 kHz/24-bit 7.1-channel audio sources without deteriorating the quality of the original sound. DTS-HD Master Audio is an irreplaceable technology that can reproduce sound faithfully as intended by the creator of music or movies.

"DTS" is a registered trademark of DTS, Inc. and "DTS-HD Master Audio" is a trademark of DTS, Inc.

Windows Media Audio 9 Professional

Windows Media Audio 9 Professional (WMA9 Pro) is a discrete surround format developed by Microsoft Corporation.

WMA9 Pro can support up to 5.1/7.1 channel playback with sampling rates up to 24-bit/96 kHz. Using the unique WMA compression techniques, WMA9 Pro can deliver multichannel music and soundtracks over high-speed internet networks at low bit rates with minimal audio degradation. Playback may be enjoyed with the Windows Media Player 9 Series (or above) and other third-party media players on a personal computer, or with an AV amplifier with on-board WMA9 Pro decoding.

Windows Media and the Windows logo are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.

About THX

The THX technologies are explained below. See www.thx.com for more detailed information.

- **THX Cinema processing**

THX is an exclusive set of standards and technologies established by THX Ltd. THX grew from George Lucas' personal desire to make your experience of the film soundtrack, in both movie theatres and in your home theatre, as faithful as possible to what the director intended. Movie soundtracks are mixed in special movie theatres called dubbing stages and are designed to be played back in movie theatres with similar equipment and conditions. This same soundtrack is then transferred directly onto Laserdisc, VHS tape, DVD, etc., and is not changed for playback in a small home theatre environment. THX engineers developed patented technologies to accurately translate the sound from the movie theatre environment into the home, correcting the tonal and spatial errors that occur. On this product, when the THX indicator is on, THX features are automatically added in Cinema modes (e.g. THX Cinema, THX Surround EX).

- **Re-Equalization**

The tonal balance of a film soundtrack will be excessively bright and harsh when played back over audio equipment in the home because film soundtracks were designed to be played back in large movie theaters using very different professional equipment. Re-Equalization restores the correct tonal balance for watching a movie soundtrack in a small home environment.

- **Timbre Matching**

The human ear changes our perception of a sound depending on the direction from which the sound is coming. In a movie theatre, there is an array of surround speakers so that the surround information is all around you. In a home theatre, you use only two speakers located to the side of your head. The Timbre Matching feature filters the information going to the surround speakers so that they more closely match the tonal characteristics of the sound coming from the front speakers. This ensures seamless panning between the front and surround speakers.

- **Adaptive Decorrelation**

In a movie theatre, a large number of surround speakers help create an enveloping surround sound experience, but in a home theatre there are usually only two speakers. This can make the surround speakers sound like headphones that lack spaciousness and envelopment. The surround sounds will also collapse into the closest speaker as you move away from the middle seating position. Adaptive Decorrelation slightly changes one surround channel's time and phase relationship with respect to the other surround channel. This expands the listening position and creates—with only two speakers—the same spacious surround experience as in a movie theatre.

- **THX Ultra2**

Before any home theatre component can be THX Ultra2 certified, it must incorporate all the features above and also pass a rigorous series of quality and performance tests. Only then can a product feature the THX Ultra2 logo, which is your guarantee that the Home Theatre products you purchase will give you superb performance for many years to come. THX Ultra2 requirements cover every aspect of the product including pre-amplifier and power amplifier performance and operation, and hundreds of other parameters in both the digital and analog domain.

- **THX Surround EX**

THX Surround EX - Dolby Digital Surround EX is a joint development of Dolby Laboratories and the THX Ltd. In a movie theater, film soundtracks that have been encoded with Dolby Digital Surround EX technology are able to reproduce an extra channel which has been added during the mixing of the program. This channel, called Surround Back, places sounds behind the listener in addition to the currently available front left, front center, front right, surround right, surround left and subwoofer channels. This additional channel provides the opportunity for more detailed imaging behind the listener and brings more depth, spacious ambience and sound localization than ever before. Movies that were created using the Dolby Digital Surround EX technology, when released into the home consumer market may exhibit wording to that effect on the packaging. A list of movies created using this technology can be found on the Dolby web site at www.dolby.com.
Only amplifier and controller products bearing the THX Surround EX logo, when in the THX Surround EX mode, faithfully reproduce this new technology in the home.
This product may also engage the "THX Surround EX" mode during the playback of 5.1 channel material that is not Dolby Digital Surround EX encoded. In such case the information delivered to the Surround Back channel will be program dependent and may or may not be very pleasing depending on the particular soundtrack and the tastes of the individual listener.

- **Advanced Speaker Array (ASA)**

ASA is a proprietary THX technology which processes the sound fed to 2 side and 2 back surround speakers to provide the optimal surround sound experience. When you set up your home theater system using all eight speaker outputs (Left, Center, Right, Surround Right, Surround Back Right, Surround Back Left, Surround Left and Subwoofer) placing the two Surround Back speakers close together facing the front of the room as shown in the diagram will provide the largest sweet spot. If for practical reasons you have to place the Surround Back speakers apart, you will need to go THX Audio Set-up screen and choose the setting that most closely corresponds to the speaker spacing, which will re-optimize the surround sound-field. ASA is used in three new modes; THX Ultra2 CINEMA, THX Ultra2 MUSIC and THX Ultra2 GAMES.

- **Boundary Gain Compensation™**

Depending on the listener's and the subwoofer's position, the listener may experience an excessive bass effect. This feature compensates for excessive bass resulting from a boundary gain effect. This feature is designed to operate when used with a subwoofer certified to THX Ultra2™ specifications.

- **THX Music**

For the replay of multi-channel music the THX MusicMode should be selected. In this mode THX ASA processing is applied to the surround channels of all 5.1 encoded music sources such as DTS, Dolby Digital and DVD-Audio to provide a wide stable rear soundstage.

- **THX Games**

For the replay of stereo and multi-channel game audio the THX Games Mode should be selected. In this mode THX ASA processing is applied to the surround channels of all 5.1 and 2.0 encoded game sources such as analog, PCM, DTS and Dolby Digital. This accurately places all game audio surround information, providing a full 360 degree playback environment. THX Games Mode is unique as it gives you a smooth transition of audio in all points of the surround field.

- **THX Loudness Plus Description**

THX Loudness Plus is a new volume control technology featured in THX Ultra2 Plus™ and THX Select2 Plus™ Certified amplifiers. With THX Loudness Plus, home theater audiences can now experience the rich details in a surround mix at any volume level. A consequence of turning the volume below Reference Level is that certain sound elements can be lost or perceived differently by the listener. THX Loudness Plus compensates for the tonal and spatial shifts that occur when the volume is reduced by intelligently adjusting ambient surround channel levels and frequency response. This enables users to experience the true impact of soundtracks regardless of the volume setting. THX Loudness Plus is automatically applied when listening in any THX listening mode. The new THX Cinema, THX Music, and THX Games modes are tailored to apply the proper THX Loudness Plus settings for each type of content

- **ASA Description**

ASA is a proprietary THX technology which processes the sound fed to 2 side and 2 back surround speakers to provide the optimal surround sound experience. When you set up your home theater system using all eight speaker outputs (Left, Center, Right, Surround Right, Surround Back Right, Surround Back Left, Surround Left and Subwoofer), be sure to go to the THX Audio Set-up screen and choose the setting that most closely corresponds to the speaker spacing, which will re-optimize the surround sound-field. ASA is used in three modes; THX Ultra2 Cinema, THX Ultra2 Music and THX Ultra2 Games.

- **THX Ultra2 Cinema**

THX Ultra2 Cinema mode plays 5.1 movies using all 8 speakers giving you the best possible movie watching experience. In this mode, ASA processing blends the side surround speakers and back surround speakers providing the optimal mix of ambient and directional surround sounds.
DTS-ES (Matrix and 6.1 Discrete) and Dolby Digital Surround EX encoded soundtracks will be automatically detected in Ultra2 Cinema mode if the appropriate flag has been encoded.

Some Dolby Digital Surround EX soundtracks are missing the digital flag that allows automatic switching. If you know that the movie that you are watching is encoded in Surround EX, you can manually select the THX Surround EX playback mode, otherwise THX Ultra2 Cinema mode will apply ASA processing to provide optimum replay.

- **THX Ultra2 Music**

For the playback of multi-channel music the THX Ultra2 Music mode should be selected. In this mode THX ASA processing is applied to the surround channels of all 5.1 encoded music sources such as DTS, Dolby Digital and DVD-Audio to provide a wide stable rear soundstage.

- **THX Ultra2 Games**

For the playback of stereo and multi-channel game audio the THX Ultra2 Games mode should be selected. In this mode THX ASA processing is applied to the surround channels of all 5.1 and 2.0 encoded game sources such as analog, PCM, DTS and Dolby Digital. This accurately places all game audio surround information, providing a full 360 degree playback environment. THX Ultra2 Games mode is unique as it gives you a smooth transition of audio in all points of the surround field.

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That's all there is to it!

Listening modes with different input signal formats

The following charts outline the listening modes available with different input signal formats, depending on the surround back channel processing and decoding method you have selected.

Stereo (2 channel) signal formats

SBch Processing	Input signal format	Standard	THX	Auto Surround
SBch Processing ON/AUTO (Automatically selects 6.1/7.1 channel decoding)	Dolby Digital Plus Dolby TrueHD WMA9 Pro (44.1 kHz/48 kHz)	**Pro Logic IIx MOVIE** **Pro Logic IIx MUSIC** **Pro Logic IIx GAME** **PRO LOGIC**[a]	**Pro Logic IIx MOVIE+THX** **PRO LOGIC+THX**[a] **THX Ultra2 GAMES**[b] **Pro Logic IIx MUSIC+THX MUSIC** **Pro Logic IIx GAME+THX GAMES**	Stereo playback
	DTS-HD Master Audio DTS-HD DTS-EXPRESS WMA9 Pro (88.2 kHz/96 kHz)	Stereo playback	**THX CINEMA** **THX MUSIC** **THX GAMES**	*As above*
	Dolby Digital Surround	**Pro Logic IIx MOVIE** **Pro Logic IIx MUSIC** **Pro Logic IIx GAME** **PRO LOGIC**[a] **Neo:6 CINEMA** **Neo:6 MUSIC**	**Pro Logic IIx MOVIE+THX** **Pro Logic IIx MUSIC+THX MUSIC** **Pro Logic IIx GAME+THX GAMES** **Neo:6 CINEMA+THX** **THX Ultra2 GAMES**[b] **Neo:6 MUSIC+THX MUSIC** **PRO LOGIC+THX CINEMA**[a]	**Pro Logic IIx MOVIE**
	DTS Surround	*As above*	*As above*	**Neo:6 CINEMA**
	SACD	*As above*	**Neo:6 MUSIC+THX MUSIC** **Pro Logic IIx MUSIC+THX MUSIC**	Stereo playback
	Other stereo sources	**Pro Logic IIx MOVIE** **Pro Logic IIx MUSIC** **Pro Logic IIx GAME** **PRO LOGIC**[a] **Neo:6 CINEMA** **Neo:6 MUSIC** **Neural THX**[c]	**Pro Logic IIx MOVIE+THX** **Pro Logic IIx MUSIC+THX MUSIC** **Pro Logic IIx GAME+THX GAMES** **Neo:6 CINEMA+THX** **THX Ultra2 GAMES**[b] **Neo:6 MUSIC+THX MUSIC** **PRO LOGIC+THX CINEMA**[a]	Stereo playback

SBch Processing	Input signal format	Standard	THX	Auto Surround
SBch Processing OFF[d]	Dolby Digital Plus Dolby TrueHD WMA9 Pro (44.1 kHz/48 kHz)	**Pro Logic II MOVIE** **Pro Logic II MUSIC** **Pro Logic II GAME** **PRO LOGIC**	**PRO LOGIC+THX** **Pro Logic II MOVIE+THX CINEMA** **Pro Logic II MUSIC+THX MUSIC** **Pro Logic II GAME+THX GAMES** **Neo:6 MUSIC+THX MUSIC** **Neo:6 CINEMA+THX**	Stereo playback
	DTS-HD Master Audio DTS-HD DTS-EXPRESS WMA9 Pro (88.2 kHz/96 kHz)	Stereo playback	**THX CINEMA** **THX MUSIC** **THX GAMES**	*As above*
	Dolby Digital Surround	**Pro Logic II MOVIE** **Pro Logic II MUSIC** **Pro Logic II GAME** **PRO LOGIC** **Neo:6 CINEMA** **Neo:6 MUSIC**	**PRO LOGIC+THX** **Pro Logic II MOVIE+THX CINEMA** **Pro Logic II MUSIC+THX MUSIC** **Pro Logic II GAME+THX GAMES** **Neo:6 MUSIC+THX MUSIC** **Neo:6 CINEMA+THX**	**Pro Logic II MOVIE**
	DTS Surround	*As above*	*As above*	**Neo:6 CINEMA**
	SACD	*As above*	**Neo:6 MUSIC+THX MUSIC** **PRO LOGIC II MUSIC+THX MUSIC**	Stereo playback
	Other stereo sources	**Pro Logic II MOVIE** **Pro Logic II MUSIC** **Pro Logic II GAME** **PRO LOGIC**[a] **Neo:6 CINEMA** **Neo:6 MUSIC** **Neural THX**[c]	**Pro Logic II MOVIE+THX CINEMA** **Neo:6 MUSIC+THX MUSIC** **Pro Logic II GAME+THX GAMES** **Pro Logic II MUSIC+THX MUSIC** **Neo:6 CINEMA+THX** **PRO LOGIC+THX**	Stereo playback

a. No sound is output from the surround back speakers when **Pro Logic** is selected.
b. Unavailable with only one surround back speaker connected.
c. This is only selectable when the input signal is an analog or PCM signal.
d. Automatically selected if no surround back speakers are connected.

Multichannel signal formats

SBch Processing	Input signal format	Standard	THX	Auto Surround
SBch Processing ON (7.1 channel decoding used for all sources)	Dolby Digital Plus Dolby TrueHD DTS-HD DTS-HD Master Audio WMA9 Pro (44.1 kHz/48 kHz) PCM (6.1/7.1 channel)	Straight decoding	**THX CINEMA** **THX MUSIC** **THX GAMES**	Straight decoding
	Dolby Digital Plus Dolby TrueHD (except for 176.4 kHz/ 192 kHz) (5.1 channel)	**Dolby Digital EX** **Pro Logic IIx MOVIE**[a] **Pro Logic IIx MUSIC**	**THX SURROUND EX** **Pro Logic IIx MOVIE+THX**[a] **THX Ultra2 CINEMA**[a] **THX Ultra2 MUSIC**[a] **THX Ultra2 GAMES**[a] **Pro Logic IIx MUSIC+THX** **EX+THX GAMES**[b]	**Dolby Digital EX** **Pro Logic IIx MOVIE**[a]
	Dolby TrueHD (176.4 kHz/192 kHz) (5.1 channel)	Straight decoding	**THX CINEMA**[b] **THX Ultra2 CINEMA**[a] **THX Ultra2 MUSIC**[a] **THX Ultra2 GAMES**[a] **THX MUSIC**[b] **THX GAMES**[b]	Straight decoding
	DTS-EXPRESS DTS-HD DTS-HD Master Audio WMA9 Pro (88.2 kHz/96 kHz) (5.1 channel)	Straight decoding	**THX CINEMA**[b] **THX Ultra2 CINEMA**[a] **THX Ultra2 MUSIC**[a] **THX Ultra2 GAMES**[a] **THX MUSIC**[b] **THX GAMES**[b]	Straight decoding
	Dolby Digital EX (6.1 channel flagged)	**Dolby Digital EX** **Pro Logic IIx MOVIE**[a] **Pro Logic IIx MUSIC**	**THX SURROUND EX** **Pro Logic IIx MOVIE+THX**[a] **THX Ultra2 CINEMA**[a] **THX Ultra2 MUSIC**[a] **THX Ultra2 GAMES**[a] **Pro Logic IIx MUSIC+THX** **EX+THX GAMES**[b]	**Dolby Digital EX** **Pro Logic IIx MOVIE**[a]
	DTS-ES (6.1 channel sources/ 6.1 channel flagged)	**DTS-ES** (Matrix/Discrete) **DTS+ Pro Logic IIx MOVIE**[a] **DTS+ Pro Logic IIx MUSIC**	**DTS-ES Matrix+THX CINEMA** **DTS-ES Discrete+THX CINEMA** **DTS+ Pro Logic IIx MOVIE+THX**[a] **THX Ultra2 CINEMA**[a] **THX Ultra2 MUSIC**[a] **THX Ultra2 GAMES**[a] **DTS-ES Matrix+THX MUSIC**[b] **DTS-ES Matrix+THX GAMES**[b] **DTS-ES Discrete+THX MUSIC**[b] **DTS-ES Discrete+THX GAMES**[b]	**DTS-ES** (Matrix/Discrete)

SBch Processing	Input signal format	Standard	THX	Auto Surround
SBch Processing ON (7.1 channel decoding used for all sources)	DTS and DTS 96/24 (5.1 channel encoding)	**DTS+Neo:6** **DTS+DD Pro Logic IIx MOVIE**[a] **DTS+DD Pro Logic IIx MUSIC**	**DTS+Neo:6+THX CINEMA** **DTS+DD Pro Logic IIx MOVIE+THX**[a] **THX Ultra2 CINEMA**[a] **THX Ultra2 MUSIC**[a] **THX Ultra2 GAMES**[a] **DTS+Neo:6+THX MUSIC**[b] **DTS+Neo:6+THX GAMES**[b] **DD Pro Logic IIx MUSIC+THX**[a]	**DTS+Neo:6**
	Dolby Digital WMA9 Pro (44.1 kHz/48 kHz) PCM (5.1 channel encoding)	**Dolby Digital EX** **DD Pro Logic IIx MOVIE**[a] **DD Pro Logic IIx MUSIC**	**THX SURROUND EX** **DD Pro Logic IIx MOVIE+THX**[a] **THX Ultra2 CINEMA**[a] **THX Ultra2 MUSIC**[a] **THX Ultra2 GAMES**[a] **DD Pro Logic IIx MUSIC+THX**[a] **DD EX+THX GAMES**[b]	**Dolby Digital EX** **DD Pro Logic IIx MOVIE**[a]
	SACD (5.1 channel encoding)	**Dolby Digital EX** **DD Pro Logic IIx MOVIE**[a] **DD Pro Logic IIx MUSIC**	**THX Ultra2 MUSIC** **DD Pro Logic IIx MUSIC+THX MUSIC**	**Dolby Digital EX** **DD Pro Logic IIx MOVIE**[a]
SBch Processing AUTO (Automatically selects 6.1/7.1 channel decoding)	Dolby Digital Plus Dolby TrueHD DTS-HD DTS-HD Master Audio WMA9 Pro PCM (6.1/7.1 channel)	Straight decoding	**THX CINEMA**	Straight decoding
	Dolby TrueHD (176.4 kHz/192 kHz) (5.1 channel)	Straight decoding	**THX Ultra2 CINEMA**[a] **THX CINEMA**[b] (Maximum 5.1 channel playback with only one surround back speaker)	Straight decoding
	Dolby Digital EX (6.1 channel flagged)	**Dolby Digital EX** **DD Pro Logic IIx MOVIE**[a]	**THX SURROUND EX**	**Dolby Digital EX** **DD Pro Logic IIx MOVIE**[a]
	DTS-ES (6.1 channel sources/6.1 channel flagged)	**DTS-ES** (Matrix/Discrete)	**DTS-ES+THX** (Matrix/Discrete)	**DTS-ES** (Matrix/Discrete)
	Other 5.1 channel sources (5.1 channel encoding)	Straight decoding	**THX Ultra2 CINEMA**[a] **THX CINEMA**[b]	Straight decoding
	SACD (5.1 channel encoding)	Straight decoding	**THX Ultra2 MUSIC**[a] **THX MUSIC**[b]	Straight decoding
SBch Processing OFF[c]	SACD (5.1 channel)	Straight decoding	**THX MUSIC**	Straight decoding
	Other 5.1/6.1/7.1 channel sources	*As above*	**THX CINEMA** **THX MUSIC** **THX GAMES**	*As above*

a. Unavailable with only one surround back speaker connected.
b. This can be selected when only one surround speaker is connected.
c. Automatically selected if no surround back speakers are connected.

Stream direct with different input signal formats

The following charts show what you will hear with different input signal formats, depending on the Stream Direct mode (see *Using Stream Direct* on page 36) you have selected.

Stereo (2 channel) signal formats

Surround Back speaker(s)	Input signal format	DIRECT	PURE DIRECT
Connected	Dolby Digital Surround	**DD Pro Logic IIx MOVIE**	**DD Pro Logic IIx MOVIE**
	DTS Surround	**Neo:6 CINEMA**	**Neo:6 CINEMA**
	Other stereo sources	Stereo playback	Stereo playback
	Analog sources	*As above*	ANALOG DIRECT (stereo)
	PCM sources	*As above*	PCM DIRECT (stereo)
	DVD-A sources	*As above*	PCM DIRECT (stereo)
	SACD sources	*As above*	SACD DIRECT (stereo)
Not connected	Dolby Digital Surround	**DD Pro Logic IIx MOVIE**	**DD Pro Logic IIx MOVIE**
	DTS Surround	**Neo:6 CINEMA**	**Neo:6 CINEMA**
	Other stereo sources	Stereo playback	Stereo playback
	Analog sources	*As above*	ANALOG DIRECT (stereo)
	PCM sources	*As above*	PCM DIRECT (stereo)
	DVD-A sources	*As above*	PCM DIRECT (stereo)
	SACD sources	*As above*	SACD DIRECT (stereo)

Multichannel signal formats

Surround Back speaker(s)	Input signal format	DIRECT	PURE DIRECT
Connected	Dolby Digital EX (6.1 channel flagged)	**Dolby Digital EX** **DD Pro Logic IIx MOVIE**[a]	**Dolby Digital EX** **DD Pro Logic IIx MOVIE**[a]
	DTS-ES (6.1 channel sources/6.1 channel flagged)	**DTS-ES** (Matrix/Discrete)	**DTS-ES** (Matrix/Discrete)
	DVD-A sources/Muti-ch PCM	Straight decoding	PCM DIRECT
	SACD sources (5.1 channel encoding)	*As above*	SACD DIRECT
	Other 5.1/6.1/7.1 channel sources	*As above*	Straight decoding
Not connected	DVD-A sources/Muti-ch PCM	Straight decoding	PCM DIRECT
	SACD sources (5.1 channel encoding)	*As above*	SACD DIRECT
	Other 5.1/6.1/7.1 channel sources	*As above*	Straight decoding

a. Unavailable with only one surround back speaker connected.

Cautions on Handing

Liquid crystal screen

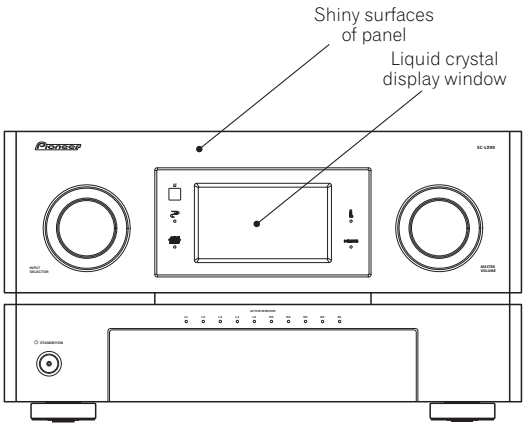
- There may be small black dots or brightly shining spots (bright points) on the liquid crystal screen. This is a particularity of liquid crystal screens, and is not a malfunction.
- When using in cold places, the screen may be dark for a while after the power is turned on. The brightness will return to normal after a while.
- If the liquid crystal display is exposed to direct sunlight, the sunlight will reflect off of it, making the display hard to see. Block the direct sunlight.

Liquid crystal backlight

- The backlight will reach the end of its service life after approximately 10 000 hours. (The service life may be shortened if used continuously at high temperatures on a rack or when used continuously in low temperatures. When using on a rack, be sure to allow for heat dissipation.)

Cleaning the shiny surfaces of the panel and the liquid crystal display window

Use the included wiping cloth (dry) to gently wipe any dirt off the shiny surfaces of this amplifier's panel and the liquid crystal display window.



Notes on handling the included wiping cloth

- Using the wiping cloth with dust on it may scratch this amplifier's surface.
- If the wiping cloth is dirty, clean it as described below. Dilute neutral detergent in about 100 parts water, wash the cloth by rubbing it against itself in this solution, rinse it carefully to remove any traces of detergent, then let it dry.
- If the wiping cloth has been lost or is extremely dirty, order a new one either from your nearest sales outlet or directly from the Pioneer Parts Order Center. You can also use a commercially available lens cleaning cloth instead.

Specifications

Amplifier section

Multi channel simultaneous power output
(20 Hz to 20 kHz, 0.05 %, 8 Ω)
any 10 ch. . . . . 140 W (Total 1400 W)
Stereo power output
20 Hz to 20 kHz, 0.05 %, 8 Ω . . . . . 200 W + 200 W
20 Hz to 20 kHz, 0.05 %, 6 Ω . . . . . 270 W + 270 W
1 kHz, 0.05 %, 4 Ω . . . . . 400 W + 400 W

- The above specifications are applicable when the power supply is 230 V.

Audio Section

Input (Sensitivity/Impedance)
PHONO MM . . . . . 5.0 mV/47 kΩ
LINE . . . . . .475 mV/47 kΩ
Frequency Response (LINE). . . . . .5 Hz to 100 000 Hz $^{+0}_{-3}$ dB
Output (Level/Impedance)
REC . . . . . 475 mV/2.2 kΩ
Signal-to-Noise Ratio (IHF, short circuited, A network)
LINE. . . . . .105 dB
Signal-to-Noise Ratio [DIN (continuous rated power output/ 50 mW)]
LINE. . . . . 92 dB/65 dB

Composite Video / S-Video Section

Input (Sensitivity/Impedance) . . . . . .1 Vp-p/75 Ω
Output (Level/Impedance) . . . . . .1 Vp-p/75 Ω
Signal-to-Noise Ratio . . . . . .65 dB
Frequency Response . . . . . .5 Hz to 10 MHz

Component Video Section

Input (Sensitivity/Impedance) . . . . . .1 Vp-p/75 Ω
Output (Level/Impedance) . . . . . .1 Vp-p/75 Ω
Signal-to-Noise Ratio . . . . . .65 dB
Frequency Response . . . . . .5 Hz to 100 MHz

Network Section

LAN terminal 10 BASE-T/100-BASE-TX

USB Section

USB terminal. . . . . USB2.0 compatible

Miscellaneous

Power Requirements. . . . . AC 220 V to 240 V, 50 Hz/60 Hz
Power Consumption . . . . . .550 W
In standby . . . . . .0.55 W (HDMI Control OFF)
0.75 W (HDMI Control ON)
Dimensions . . . . . .440 (W) mm x 247 (H) mm x 479 (D) mm
Weight (without package). . . . . 35.5 kg

Furnished Parts

Setup microphone (for Auto MCACC setup). 1
AA/IEC R6P dry cell batteries 2
Remote control unit. 1
iPod control cable 1
Power cord 1
Wiping cloth 1
Warranty card 1
These operating instructions

Note

- Specifications and the design are subject to possible modifications without notice, due to improvements.

Cleaning the unit

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surface is dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleansers.
- Never use thinners, benzine, insecticide sprays or other chemicals on or near this unit, since these will corrode the surface.

Our philosophy

Pioneer is dedicated to making your home theater listening experience as close as possible to the vision of the moviemakers and mastering engineer when they created the original soundtrack. We do this by focusing on three important steps:

1 Achieving the highest possible sound quality

2 Allowing for customized acoustic calibration according to any listening area

3 Fine-tuning the amplifier with the help of world-class studio engineers[1]

[1] *With the cooperation of AIR Studios, this amplifier has been designated AIR Studios Monitor Reference:*

Features

- **Direct Energy HD Amplifier**

Through a collaboration, Pioneer and ICEpower have jointly development a unique class D amplifier called a "Direct Energy High Fidelity Class D (HD) amplifier". This new generation reference amplifier offers outstanding performance (high output of 1400 W simultaneous, high response and low distortion of 0.005 %) with high sound quality and reproduces the latest in multi-channel digital contents.

- **10-channel amplifier multi-assign function**

One of five patterns of the 10-channel amplifier (speaker terminals) can be selected according to the desired scene.

- **Easy setup using Advanced MCACC**

The Auto MCACC Setup provides a quick but accurate surround sound setup, which includes the advanced features of Professional Acoustic Calibration EQ. This innovative technology measures the reverb characteristics of your listening area, allowing you to customize your system calibration with the help of a graphical output that can be displayed on-screen, or using a computer. With the additional benefits of numerous MCACC preset memories, standing wave control and microphone measurements from a series of reference points, your home theater experience can be truly customized for optimal surround sound.

- **Phase Control**

The Phase Control feature corrects the phase distortion as well as group delay for LFE (Low-Frequency Effects) audio signals during multichannel playback.

- **Full Band Phase Control**

The Full Band Phase Control feature analyzes the frequency-phase characteristics of the speakers connected and corrects the phase distortion to the flattened frequency-phase characteristics. This correction minimizes the group delay of the middle- and low-frequency ranges against the high-frequency range and improves the frequency-phase characteristics across all ranges. Furthermore, the enhanced frequency-phase characteristics between channels ensure better surround sound integration.

- **HOME MEDIA GALLERY**

This amplifier can play back contents stored on your computer when your computer is connected to the LAN terminal of this amplifier. It is also possible to play contents stored on USB devices.

- **Dolby Digital and DTS decoding, including Dolby Digital EX, Dolby Pro Logic IIx, DTS 96/24, DTS-ES, Dolby Digital Plus, Dolby TrueHD, DTS-EXPRESS and DTS-HD Master Audio**

Dolby Digital and DTS decoding brings theater sound right into your home with up to six channels of surround sound, including a special LFE (Low Frequency Effects) channel for deep, realistic sound effects.

The built-in Dolby Pro Logic IIx and DTS Neo:6 decoders not only provide full surround sound decoding for Dolby Surround sources, but will also generate convincing surround sound for any stereo source.

Also, with the addition of a surround back speaker, you can take advantage of the built-in Dolby Digital EX and DTS-ES decoders for six-channel surround sound.

Furthermore, Dolby Digital Plus and Dolby TrueHD, which are designed for the next-generation high-definition media such as Blu-ray Disc and HD DVD, support up to 7.1 channels and 8 channels respectively.

DTS-EXPRESS is a low-bitrate encoding technology supporting up to 5.1 channels, with fixed data transfer rates ranging from 24 kbps to 256 kbps (this encoding is available only when signals are delivered to this amplifier as primary audio).

DTS-HD Master Audio delivers audio signals to listeners without any loss of data with its high transfer rates.

THX certified design
This amplifier is THX Ultra2™ certified, allowing you to take advantage of new THX technologies such as ASA (Advanced Speaker Array), which can process any 5.1 channel source for 6.1 channel (THX Surround EX) or 7.1 channel (THX Ultra2 CINEMA, THX Ultra2 MUSIC and THX Ultra2 GAMES) playback. These features are also available when using the i.LINK interface.

- **HDMI and digital video conversion**

This amplifier is compatible with the HDMI digital video format (HDMI Version 1.3a), providing you with high-definition digital video/audio via a single cable. High-quality sound formats such as DTS-HD and Dolby TrueHD are supported while this amplifier is also compatible with the DeepColor and x.v.Color feature (x.v.Color is trademarks of Sony Corporation). You can operate this amplifier in synchronization with your Pioneer component that supports the HDMI Control function by connecting your component to this amplifier via HDMI. Also, the built-in digital video converter of this amplifier makes both de-interlacing and up-scaling possible, and analog video signals being input are converted and output as digital video signals at the HDMI terminal.

- **i.LINK digital interface**

The i.LINK interface makes it possible to connect this amplifier to i.LINK-equipped components, allowing you to enjoy high sampling rate (up to 192 kHz) PCM multichannel digital audio from DVD-Audio and SACD discs, as well as digital audio from DVD-Video, CD and Video CD discs, all with a single cable.

- **iPod Ready**

This amplifier is equipped with an iPod terminal allowing digital audio signal transfer. Movies can be played on Video Browse-compatible iPods.

Discover the benefits of registering your product online at **http://www.pioneer.co.uk** (or **http://www.pioneer.eu**)

PIONEER CORPORATION
4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC.
P.O. BOX 1540, Long Beach, California 90801-1540, U.S.A. TEL: (800) 421-1404
PIONEER ELECTRONICS OF CANADA, INC.
300 Allstate Parkway, Markham, Ontario L3R 0P2, Canada TEL: 1-877-283-5901, 905-479-4411
PIONEER EUROPE NV
Haven 1087, Keetberglaan 1, B-9120 Melsele, Belgium TEL: 03/570.05.11
PIONEER ELECTRONICS ASIACENTRE PTE. LTD.
253 Alexandra Road, #04-01, Singapore 159936 TEL: 65-6472-7555
PIONEER ELECTRONICS AUSTRALIA PTY. LTD.
178-184 Boundary Road, Braeside, Victoria 3195, Australia, TEL: (03) 9586-6300
PIONEER ELECTRONICS DE MEXICO S.A. DE C.V.
Blvd.Manuel Avila Camacho 138 10 piso Col.Lomas de Chapultepec, Mexico,D. F. 11000 TEL: 55-9178-4270
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